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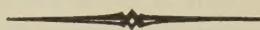
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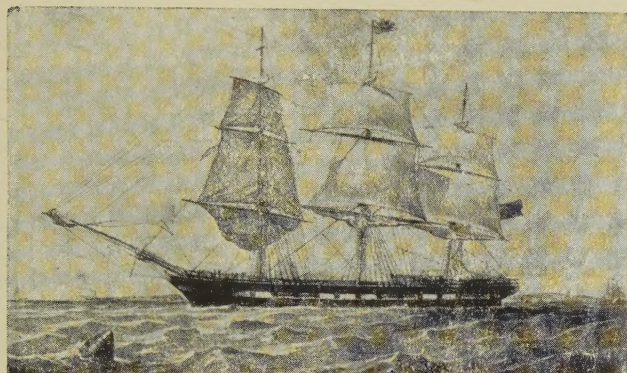
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H. M. S. *Erebus and Terror*

(Winted)

of May 1847

Lat. 70° 5'

Long. 23° W

Having wintered in 1846-7 at Beechey Island

in lat 70° 13' 28" N - long 91° 39' 00" W - also according

Wilmington Channel to lat 77° and thence by the North
Island to Cape Walker Island

Commander

In John Franklin Commanding the Expedition
All well

WHOEVER finds this paper is requested to forward it to the Secretary of the Admiralty, London, with a note of the time and place at which it was found: or, if more convenient, to deliver it for that purpose to the British Consul at the nearest Port.

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Left the Ship Monday 24th May 1847 - the party
consisting of 2 officers and 6 men

Yr. Obedt. Servant
John W. Moore

Facsimile of the Franklin expedition record (reduced in size), in the Scott Polar Research Institute. (Scott Polar Research Institute Document No. 54/20/1.)

The MARINER'S MIRROR

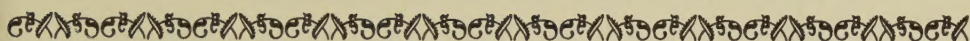
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*after the manner of their
use in all ages and
among all
Nations*



VOL. 44. No. 3

1958



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CORRECTIONS TO VOL. 44

- P. 79, after line 23, *for* J. de C. Island *read* J. de C. Ireland.
P. 88, line 1, *for* TvÄ *read* TvÅ.
P. 160, line 16, *for* south choir *read* north choir aisle.
P. 146, thirteenth line from bottom, *for* previous *read* November.
P. 146, thirteenth line from bottom, *for* page 9 *read* page 275.

THE TWO FRANKLIN EXPEDITION RECORDS FOUND ON KING WILLIAM ISLAND

By Richard J. Cyriax

CAPTAIN SIR JOHN FRANKLIN, commanding H.M. ships *Erebus* and *Terror* (Captain F. R. M. Crozier) left Great Britain in May 1845 to seek a north-west passage. Franklin spent the first winter (1845-6) at Beechey Island, and then sailed southwards until, in September 1846, his ships were beset in ice in the upper part of Victoria Strait. They remained beset during the following winter (1846-7) and at the end of May 1847 lay about 17 miles north-west by west from Cape Felix, the northern extremity of King William Island. Franklin then sent to that island a small party commanded by his First Lieutenant, Graham Gore, H.M.S. *Erebus*, with Charles Frederick Des Voeux, Mate, as second officer.⁽¹⁾ The two records to be considered in detail in this article were left by Gore in 1847 on King William Island. A second entry was made on one of them in 1848.

Both records were discovered in 1859 by Lieutenant (later Captain) William Robertson⁽²⁾ Hobson, R.N., when serving as second in command of the private Franklin search expedition led by Captain (later Admiral Sir) Francis Leopold M'Clintock. Members of the Franklin expedition may have left, and probably did leave, more than two records on King William Island,⁽³⁾ but only these two have been found there. Both were written on official forms which had been supplied to Franklin by the Admiralty for throwing overboard in bottles or copper cylinders after he had sailed northwards beyond the 65th parallel of north latitude.⁽⁴⁾ Each form, made of blue paper, bore printed notices which, in six European languages, requested its finder to send it either to the Admiralty or to certain officials abroad, with a note of the time and the place of its discovery. It bore also printed headings followed by printed lines on which to enter the name of the ship, the date, and the latitude and longitude. Three additional lines were provided for any further information. Lastly, another blank line was included for a signature, and this line ended with the printed word *Commander*.

M'Clintock stated that the two records deposited by Gore in 1847 were duplicates.⁽⁵⁾ They gave exactly the same information about the Franklin expedition, but were not couched throughout in identical terms. Both

papers had been severely damaged by rust and damp before Hobson found them, but the entries made in 1847 were, and still are, perfectly legible.

For reasons that will appear later, the record to which a second entry was added in 1848 is of very much greater value than the record bearing only the entry made in 1847. Nevertheless, this record, with its single entry, is by no means devoid either of interest or of value.

The first record to be considered (hereinafter described as Record I) is that to which a second entry was added in 1848. This record is exhibited in the National Maritime Museum at Greenwich. Fascimiles have appeared in many works.⁽⁶⁾ In the transcription which follows, the words and figures printed on the form, are enclosed within brackets. The first entry, made in 1847, runs as follows:

(H.M.S.)hips *Erebus* and *Terror*

(of) May (184)7 { Wintered in the Ice in
(Lat.) 70° 5' N (Long.) 98° 23' W

Having wintered in 1846-7 at Beechey Island in Lat. 74° 43' 28" N. Long. 91° 39' 15" W after having ascended Wellington Channel to Lat. 77°—and returned by the West side of Cornwallis Island.

Sir John Franklin commanding the Expedition.

All well.

Party consisting of 2 officers and 6 Men left the Ships on Monday 24th May 1847.

Gm. Gore. Lieut.

Chas. F. Des Voeux Mate

The bracket uniting the phrase 'Wintered in the Ice in', with the latitude and longitude on the next line, was added in ink to the above entry and the printed word *Commander* was crossed out. One slight alteration suggests that the writer intended to state that the ships had wintered 'at' not 'in' some place, but changed his mind, for he wrote 'in' over a letter that appears to be an 'a'.

The second record (hereinafter described as Record II) was kept by Lady Franklin. It was included among the Arctic exhibits shown at the Royal Naval Exhibition in London in 1891,⁽⁷⁾ and has recently, in accordance with the terms of the Lefroy bequest, come into the possession of the Scott Polar Research Institute, Cambridge. It runs as follows.

(H.M.S.)hips *Erebus* and *Terror*

(of) May (184)7 { Wintered in the Ice in
(Lat.) 70° 5' (Long.) 98° 23' W

Having wintered in 1846-7 at Beechey Island in Lat. 74° 43' 28" N—Long. 91° 39' 15" W—after ascending Wellington Channel to Lat. 77° and returning by the West side of Cornwallis Island.

Sir John Franklin commanding the Expedition

All well.

Left the Ships Monday 24th May 1847—the party consisting of 2 officers and 6 men.

Gm. Gore. Lieut.

Chas F. Des Voeux Mate.

The bracket uniting the phrase 'Wintered in the Ice in' with the latitude and longitude was added in ink, and the printed word *Commander* was crossed out. In these respects the above entry resembled the corresponding entry on Record I, but differed from it not only as regards some of the wording but also in two minor respects—the letter 'N' was not inserted after the figures (70° 5') given for the latitude of the position in which the ships had just wintered, and the words 'All well' were not underlined. Neither record bears a serial number, but this omission was not a departure from established usage nor contrary to Franklin's orders.

It is worthy of mention that following the discovery of these records in 1859 some surprise was occasioned by their statements that Franklin had returned from Wellington Channel by the 'West side of Cornwallis Island'. This island had been presumed to be joined to Bathurst Island, lying to the westward of it, by a long narrow isthmus, but the Franklin records revealed that a strait separates the two islands. This strait was named after Crozier and was thereafter shown on charts in what was presumed to be its probable position. It is now known that Bathurst Island and Cornwallis Island are separated by two straits, an eastern and a western, and that a relatively small island lies between the two straits. Which of these two was navigated by Franklin is uncertain. Parties from the relief expeditions were not far from the western strait in 1851 and again in 1853, but did not reach it; and another party, apparently under the impression that it was travelling over very low land, probably twice crossed the narrow eastern strait in 1851. For nearly ninety years the two Franklin records found in 1859 remained the only authority for the existence of 'Crozier Strait'.⁽⁸⁾

Both the entries on these records are in the handwriting of Commander James Fitzjames, second in command of the *Erebus* and third in command of the expedition. Gore and Des Voeux signed their own names, but Fitzjames wrote the words denoting their ranks.⁽⁹⁾ Since he was not a member of the party which left the ships, both records must have been prepared on board before Gore's departure. Fitzjames filled in the month and the year at the head of each entry but did not add the day of the month, obviously because he did not and could not know on which day or days the records would be deposited on King William Island. His statements that a party left the ships on Monday, 24 May 1847, thus appear, strictly speaking, to have been prophetic rather than factual.

Records I and II both contain the same mistakes. First, no part of Beechey Island lies in the longitude, 91° 39' 15", given by Fitzjames. This longitude is approximately that of the head of Gascoyne Cove, several miles to the east of Beechey Island.⁽¹⁰⁾ How this mistake arose there is nothing to show.

Secondly, the Franklin expedition wintered at Beechey Island from 1845 to 1846, not, as Fitzjames stated, from 1846 to 1847. This mistake is made apparent, not only by the other dates mentioned on the records, but also by the dates on the head-boards of three of Franklin's men who died at Beechey Island during the first few months of 1846.⁽¹¹⁾ How Fitzjames came to commit this clerical error cannot be determined.

M'Clintock concluded from the erroneous dates given for the winter spent at Beechey Island that the two records were considered to possess very little importance.⁽¹²⁾ A further conclusion which appears fully justified is that they were written and signed very hurriedly. The incorrect longitude given for Beechey Island was not a readily discernible error, but the dates inserted for the winter spent at that island were at variance with the other dates mentioned. So obvious a mistake is unlikely, except under somewhat unusual circumstances, to have remained undetected. Since these wrong dates appear on both the records, it seems probable that Fitzjames, as soon as he had completed one record, at once prepared a second one based upon the first, and copied the wrong dates on to the second record without realizing that he was repeating an error. The records themselves afford no definite indication of the order in which they were written, but trivial differences, which have already been mentioned, suggest that Record I was written with greater attention to detail than Record II and therefore may have been the original.

A further reason for concluding that the records were prepared very hurriedly is that Gore and Des Voeux are much more likely to have added their signatures after the records had been completed than to have signed their names on blank forms which were afterwards filled in by Fitzjames. They themselves, as well as Fitzjames, presumably overlooked the mistakes. Both records thus appear to have been not only written but also signed in a hurry, perhaps when Gore was about to leave the ship. Each record, when fully completed, was rolled up and placed in a tin cylindrical case which was sealed with solder and was then handed to Gore.

Neither record gave any indication of the purpose of Gore's journey. But there can be no reasonable doubt that he was ordered to examine the unknown central part of the west coast of King William Island, and was expected to complete the discovery of a North-West Passage.⁽¹³⁾ Where he landed is not known; presumably he did so at or near Cape Felix, the land nearest to the ships, and then marched southwards along the west coast of King William Island. Commander (later Admiral Sir) James Clark Ross had examined this coast between Cape Felix and Victory Point, which was the furthest point reached by him to the southward, and had built a cairn and left a record there on 30 May 1830.⁽¹⁴⁾ Gore found a cairn

which he believed to be built by Ross at Victory Point, and beneath this cairn he deposited Record I. The cairn lay at a marching distance of about 37 statute miles from the ships if Gore had landed at or near Cape Felix. Ross had seen a line of coast extending from Victory Point towards the south-west but he had not visited it,⁽¹⁵⁾ so Gore entered ground untrodden by previous explorers as soon as he had passed Victory Point. At a marching distance of about 8 miles to the south of the cairn in which he had left Record I, Gore deposited Record II in another cairn at Gore Point, on the south side of Collinson Inlet. Neither he nor any other member of the Franklin expedition made any additions to this record after it had been taken from the ships in 1847, and the metal case containing it was still sealed with solder when Hobson found it twelve years later.⁽¹⁶⁾ Nothing is positively known of Gore's subsequent proceedings on King William Island, but there is no doubt that he finally returned to the ships.

The *Erebus* and *Terror* remained beset in Victoria Strait and slowly drifted southwards. Finally, in April 1848, they were abandoned by Crozier, who had succeeded to the command of the expedition after Franklin's death in June 1847. Crozier landed and encamped in King William Island a few miles to the south of the cairn under which Gore had deposited Record I. This was brought to the encampment, and then Fitzjames, writing in the margin along three sides of the paper, added a second entry which is the last message ever received from the expedition. Crozier signed his name and added a brief statement of his intentions. The record was replaced in its metal case, which was closed but not re-sealed with solder, and was then deposited in a large cairn.⁽¹⁷⁾ When Hobson found this record, the right-hand bottom corner had rotted away, and in the following transcription the words, letters and figures which had presumably been written on the missing corner are closed within brackets:

(25th April 1848 H.M.Ship(s) *Terror* and *Erebus* were deserted on the 22nd April, 5 leagues NNW of this (hav)ing been beset since 12th Septr. 1846. The Officers and Crews consisting of 105 souls, under the command (of Cap)tain F. R M Crozier landed here—in Lat 69° 37' 42" Long 98° 41'. (This p)aper was found by Lt. Irving under the cairn supposed to have been built by Sir James Ross in 1831, 4 miles to the Northward—where it had been deposited by the late Commander Gore in June 1847. Sir James Ross' pillar has not however been found, and the paper has been transferred to this position which is that in which Sir J. Ross' pillar was erected—Sir John Franklin died on the 11th June 1847 and the total loss by deaths in the Expedition has been to this date 9 Officers and 15 Men.

James Fitzjames Captain H M S *Erebus*

F.R.M. Crozier

Captain and Senior Offr.

and start on tomorrow 26th for Backs Fish River.

Fitzjames, in addition to writing the above second entry, completed the date at the head of the first entry by adding the day of the month (omitted

on both records in 1847) to the month and year. The date, as he completed it, reads '28 of May 1847', but the colour of the ink used to write '28' led M'Clintock to conclude that Fitzjames had added that number when writing the second entry, and that the date was that of Gore's deposition of Record I in the cairn believed by him to have been built by Ross.⁽¹⁸⁾ Since

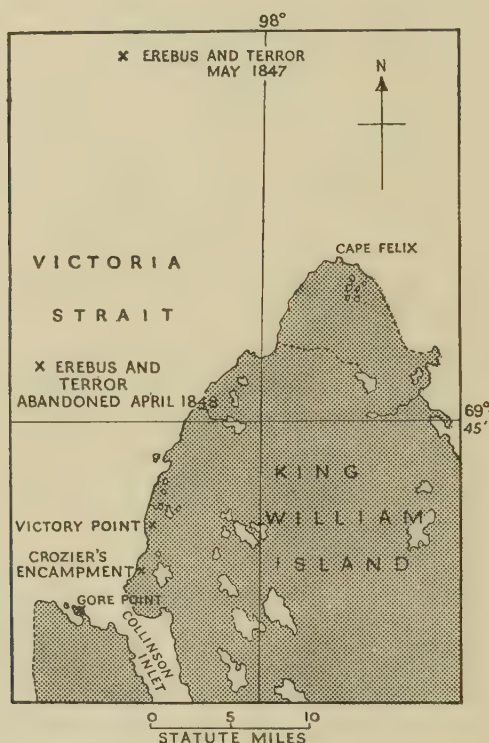


Fig. 1 Part of the north coast of King William Island, based on Department of Mines and Resources, Surveys and Mapping Bureau, National Topographic Series, Aeronautical Edition, Sheet 67 S.W./67 S.E., new edition, Ottawa, 1948. In 1847 Gore left Record I at or near Victory Point and Record II at Gore Point. In 1848 Record I was taken from Victory Point to the encampment which, a few miles to the south, was made by Crozier after abandoning the *Erebus* and *Terror*. In 1859 Hobson found Record I at this encampment and Record II at Gore Point.

Fitzjames apparently completed this date when writing the second entry he must have glanced at the first entry, but he cannot have examined this very closely for he left unaltered the incorrect dates given for the winter spent at Beechey Island. He committed another but trivial mistake in stating that Ross's cairn, actually built in 1830, had been built in 1831.

The second entry contains four emendations. Two of these were evidently, and the other two were presumably, made by Fitzjames. He wrote the figure '5', in the phrase '5 leagues NNW of this', over another figure, which appears to be a '3'. When stating the month in which Gore had deposited the record in 1847, Fitzjames first wrote 'May' but then deleted 'May' and replaced it by 'June'. He inserted the phrase '4 miles to the Northward' into the text by means of a caret. Lastly, when he referred to the cairn from which Irving had just taken Record I, deposited there by Gore in 1847, he evidently intended to say that Irving had found the record 'in' the cairn, and he put down 'in' but then wrote 'under' over 'in', and the way in which the words are spaced shows that he made this alteration at once. It thus seems possible that Irving, in addition to Crozier and perhaps other officers, was present when the second entry was being written, that Fitzjames read out aloud what he was writing down, and that the last two emendations mentioned above were suggested by Irving himself. Be that as it may, Fitzjames obviously wrote the second entry with great care and with close attention to detail.

This record, one of the most important documents concerning Arctic exploration, contains several statements which demand detailed consideration. Moreover, it warrants several inferences which, perhaps, are not immediately evident. Unfortunately, it makes no mention of several matters of great interest and, for this reason as well as for other reasons that will become apparent, is not as satisfactory as could be desired.

Although Fitzjames did not mention Victory Point by name, he implied that Crozier had landed and encamped there, for Victory Point was the only place at which Ross, according to his narrative, had left a record on the west coast of King William Island.⁽¹⁹⁾ Moreover, the latitude and longitude given by Fitzjames for Crozier's landing place corresponded closely to those given by Ross for Victory Point.⁽²⁰⁾ M'Clintock believed that Crozier, when he abandoned the ships, did not intend to leave a record on King William Island but decided after he had landed there to leave a notice of his intentions for the information and guidance of possible searchers, and to deposit this notice at a place which was already known as a definite one. Victory Point was such a place, and M'Clintock concluded that Crozier for this reason decided to leave Record I at his encampment before starting for the Great Fish River.⁽²¹⁾

There can, however, be little doubt that Crozier, owing to a combination of causes, was misled with regard to his position, and that Victory Point really lay about 3 miles to the north of his encampment. The cairn under which Gore had deposited Record I in 1847, if not the actual cairn built by Ross at Victory Point, must have been situated very near to the

place in which Ross had built his cairn. Hobson in 1859 found a cairn which may have been Ross's,⁽²²⁾ and in 1949 Inspector H. A. Larsen rebuilt a cairn from the remains of one which he thought could have been erected by Ross. Both these cairns lay about 3 miles to the north of Crozier's encampment.⁽²³⁾

Fitzjames's second entry shows that Franklin, Gore, 7 other officers, and 15 men were dead and therefore, since 24 officers and 105 men had sailed with the expedition,⁽²⁴⁾ that 15 officers and 90 men were still living. These 15 officers included Crozier, Fitzjames and Irving. The scanty indications available from sources other than Record I are inconclusive as regards the remaining officers.

Charles F. Hall in 1869 found on the south coast of King William Island a skeleton believed to be that of Lieutenant Henry Thomas Dundas le Vesconte, of H.M.S. *Erebus*,⁽²⁵⁾ so this officer presumably died during the march towards the Great Fish River and was living when Fitzjames wrote the second entry. Since Des Voeux had accompanied Gore in 1847 he would seem to have been the most likely officer to have been asked in 1848 to fetch Record I to Crozier's encampment, but the task was entrusted to Irving, and it has therefore been suggested that Des Voeux was dead.⁽²⁶⁾ The survivors took with them some of Franklin's and of Gore's personal belongings which were evidently intended for relatives and friends at home, so that the relics which have been identified as the property of other officers do not of themselves prove that these officers were alive when Crozier left his encampment for the Great Fish River. As regards the men who had died, three have been identified from the head-boards over their graves at Beechey Island⁽²⁷⁾; of the others nothing is known.

The second entry makes no mention of the discovery of a north-west passage in 1847 by Gore or by any other officer, despite the fact that the completion of that discovery was the principal purpose of the expedition. There is no reason to suppose that Gore failed to accomplish the task with which he was probably entrusted, but proof is wholly lacking. Whether the Franklin expedition discovered a north-west passage in 1847, or during the fatal march towards the Great Fish River in 1848, is therefore a question to which a definite answer cannot be given.

As has been mentioned, M'Clintock believed that the '28 of May 1847'—the date completed by Fitzjames at the head of the first entry on Record I when he wrote the second entry—was the day on which Gore during his outward journey deposited the record in the cairn believed by him to have been built by Ross. The position occupied by that date in the text of the first entry is exactly that in which the date of deposition of the record would ordinarily have been inserted. Moreover, the marching dis-

tance from the ships to the cairn would have amounted to about 37 statute miles if Gore had landed at or near Cape Felix, so that if he started on 24 May he would probably have reached the cairn in which he deposited Record I on 28 May. Nevertheless, it appears to be by no means certain that Gore did deposit Record I on that day. Fitzjames stated in the second entry that the record had been left by Gore in June; he first wrote 'May', but then replaced it by 'June'. If Gore deposited Record I on 28 May, Fitzjames's alteration of 'May' to 'June' was a mistake, but if 'June' was right either Fitzjames committed an error when he completed the date, '28 of May, 1847', at the head of the first entry, or that date did not refer to the deposition of the record.

That Gore either left or originally intended to leave the ships on 'Monday, 24th. May, 1847' appears to be certain. Both records state that he did leave on that day and that Franklin was commanding the expedition. The records cannot have been written on 24 June, for Franklin was then no longer in command, and 24 June 1847 was not a Monday but a Thursday. Fitzjames, may, however, have made a mistake when he changed the month of deposition of Record I from 'May' to 'June'; and several writers, in the belief that he did make a mistake, have accounted for it in various ways. The explanation that appears, in the present writer's opinion, to be the one least open to objection is that Fitzjames had in mind a third record which was left by Gore on King William Island but was not recovered by the search expeditions. Fitzjames is unlikely to have been thinking of Record II, for Gore placed this record in a cairn that lay at a marching distance of only 8 miles to the southward of the cairn in which he deposited Record I, and if he left this record on 28 May he would probably have succeeded in travelling 8 miles before the end of the month. Furthermore, both records were evidently intended to be left during his outward journey, so that he is unlikely to have deposited Record II during his return journey.

The present writer formerly saw no adequate reason for taking exception to the generally accepted conclusion that Gore deposited Record I on 28 May, but further reflexion has led him to doubt whether that conclusion is necessarily correct. Fitzjames stated in the second entry that Gore left the record in June, and his deliberate alteration of 'May' to 'June' shows that he believed 'May' to be a mistake. If June is right, Gore cannot have deposited Record I on 28 May and this date must refer to some other occurrence. What this was cannot be determined, but it can possibly have been Gore's departure from the ships. He may have been compelled on 24 May to postpone his departure until 28 May or he may have left on 24 May but for some reason have been forced to return soon afterwards, preparatory to a fresh start, which took place on 28 May. Since both

records were soldered up in metal cylinders, they could not have been altered and again made ready without unsealing and then re-sealing the cylinders, and this procedure, if considered at all, may well have been deemed superfluous if the sole purpose was to alter the dates of Gore's departure on records which, as M'Clintock remarked, were evidently considered to be of very little importance. As has already been mentioned, Fitzjames cannot have examined very carefully the first entry on Record I when he wrote the second entry, so that his leaving unchanged on the first entry the day, 24 May, of Gore's departure, does not exclude the possibility that Gore left the ships on 28 May and deposited Record I in June.

In the second entry, Fitzjames referred to Gore as 'the late Commander Gore'. After Franklin's death on 11 June 1847, Fitzjames became acting captain of the *Erebus*, and Gore, the senior lieutenant in the expedition, became acting commander in place of Fitzjames. Gore must therefore have survived Franklin. Moreover, the second entry reveals an acquaintance on the part of Fitzjames with at least some of Gore's proceedings on King William Island in 1847. The evidence is thus sufficient to warrant the inference that Gore returned to the ships after his journey, but when he did so must remain a matter for speculation. He evidently died after 11 June 1847, but before Fitzjames wrote the second entry on 25 April 1848.

Crozier's conclusion that Gore in 1847 had mistaken the position of Victory Point shows that Gore cannot have found Ross's record in the cairn which he thought Ross had built. Had he found that record there no doubts could have arisen a year later regarding the position of Victory Point. His reasons for thinking that the cairn was Ross's are not known, but there can be little doubt that his conclusion that this cairn marked the position of Victory Point was, if not quite correct, at all events much more correct than that reached by Crozier a year later.

I am indebted to the Trustees of the National Maritime Museum for their kind permission to examine Record I, and to the Director of the Scott Polar Research Institute for his kind permission to include a facsimile of Record II (which has been reduced in size), Scott Polar Research Institute Document No. 54/20/1, and to publish this description.

REFERENCES

- (1) The ranks given are those held by Gore and Des Voeux when the expedition sailed. Gore was promoted to the rank of commander and Des Voeux to that of lieutenant, on 9 November 1846. W. R. O'Byrne, *A Naval biographical dictionary* (London, 1849).
- (2) This officer's second christian name, usually said to have been Robert, is given as Robertson on the tombstone over his grave at Pitminster, near Taunton. (Seen by the writer.)

- (3) Sir F. Leopold M'Clintock, *The Voyage of the 'Fox', etc.*, 5th edition (London 1881), pp. 238-43, 301.
- (4) Franklin's orders, section 19. Parliamentary Paper, *Copies of instructions to Captain Sir John Franklin, etc.* (London, 1848), p. 6.
- (5) *Op. cit.* (1881), p. 257.
- (6) *Idem.* 1st edition (London, 1859), and all subsequent editions; *The Illustrated London News* (London, 1 October 1859); H. D. Traill, *The Life of Sir John Franklin* (London, 1896), opp. p. 363; and many other works. Some of the minor corrections which were made when this record was being written, and are mentioned later, are not clearly shown on all the published facsimiles. They are plainly visible on the original record.
- (7) *Official Catalogue, Royal Naval Exhibition* (London, 1891), p. 7, item 21 B.
- (8) *The Geographical Journal* (London, March 1953); *Arctic Pilot* (Hydrographic Department, Admiralty, London), Vol. 3, 4th edition, 1947, p. 358.
- (9) Sir John Richardson stated that Franklin had signed his own name (on Record I) but had not written the word 'Sir' immediately preceding his name (*The Polar Regions*, Edinburgh, 1861, footnote on p. 164). The words 'John Franklin' are not, however, in Franklin's usual handwriting on either record, and appear to have been written by Fitzjames.
- (10) *Arctic Pilot, op. cit.* (1947), p. 270; Admiralty charts 2335 with corrections to 1925, and 2118 with corrections to 1940.
- (11) P. C. Sutherland, *Journal of a voyage in Baffin's Bay and Barrow Straits, etc.*, 2 vols. Vol. 1 (London, 1852), pp. 304, 305.
- (12) *Op. cit.* (1881), p. 257.
- (13) *Idem.* pp. 246, 257; S. Osborn, *The Last voyage of Sir John Franklin*, in *Once a week*, Vol. 1 (London, 1859), pp. 365, 366. For the nature of the geographical problem involved, see R. J. Cyriax, *Sir John Franklin's last Arctic expedition* (London, 1939), pp. 127, 128; and R. J. Cyriax and J. M. Wordie, 'Centenary of the sailing of Sir John Franklin with the *Erebus* and *Terror*', *The Geographical Journal*, Vol. CVI (London, 1945), pp. 169-97.
- (14) Sir John Ross, *Narrative of a second voyage in search of a North-West Passage* (London, 1835), pp. 415-20.
- (15) *Idem.* p. 418, and sketch of the coast to the south of Victory Point on map at end.
- (16) Sir F. Leopold M'Clintock, *op. cit.* (1881), pp. 257, 317.
- (17) *Idem.* pp. 244-6, 257-8.
- (18) *Idem.* p. 257.
- (19) Sir John Ross, *op. cit.* pp. 415-20.
- (20) James Clark Ross gave lat. 69° 37' 49" N., long. 98° 40' 49" W. Sir John Ross, *op. cit.* p. 420.
- (21) Sir F. Leopold M'Clintock, *op. cit.* p. 258.
- (22) *Idem.* pp. 301, 318.
- (23) For a detailed discussion regarding the position of Victory Point, see R. J. Cyriax, 'The position of Victory Point, King William Island', in *The Polar Record*, Vol. VI (Cambridge), No. 44, July 1952.
- (24) Twenty-four officers and 110 men sailed from Great Britain but five men were invalided home during the voyage to Greenland.
- (25) J. E. Nourse, *Narrative of the second Arctic expedition made by Charles F. Hall* (Washington, 1879), pp. 401, 418, and footnote on p. 418; Sir F. Leopold M'Clintock, *op. cit.* p. (54).
- (26) B. Bell, *Lieutenant John Irving, R.N., of H.M.S. Terror* (Edinburgh, 1881), p. 153. (Notes by Sir Clements R. Markham.)
- (27) P. C. Sutherland, *op. cit., loc. cit.*

A NAUTICAL DICTIONARY

By L. G. Carr Laughton

An article under this title, written by Mr L. G. Carr Laughton, the Society's first Honorary Editor, will be found on page 229 of volume ten of *The Mariner's Mirror* for 1924 and is reprinted below. The preparation of a nautical dictionary was an object noted in the original rules of the Society and it was dear to Mr Laughton's heart. He made it his life's work and, at first anyway with the help of volunteer readers of likely nautical works, produced four drawers full of slips of paper, recording dated examples of the use and meaning of nautical terms. This is a good start, and the accumulation of slips is now in the National Maritime Museum. The Council has recently considered how to pursue the Society's intention of producing a worthy dictionary and has decided to appoint a small working committee, consisting of the Officers of the Society, and four others, to make a start. They consider it should be an historical dictionary, with definitions and dates of use, the citations and sources being indicated by short titles. The approximate period to be covered would be between 1400 and 1900, but sailing ship terms would be continued to the present day and terms in common use by 1400 carried back to their source. The Hon. Secretary is producing a list of the words collected by Mr Laughton as a start towards compiling a list of the words to be defined. Members of the Society particularly interested in the compilation of this dictionary and prepared to help, or with suggestions to offer, are invited to write to the Hon. Secretary.

GEORGE P. B. NAISH

WHEN the Society for Nautical Research was founded in 1910, it was agreed that its activities should include the collection of materials for the eventual compilation of "a complete and scholarly nautical Encyclopaedia or Dictionary"; and the rule defining the purpose of the Society was accordingly so framed as to include this project (Rule II (3)).

In *The Mariner's Mirror* for 1911 (vol. 1, 245) an attempt was made to define the project, and the help of members was invited. The passage may, perhaps with advantage, be repeated here:

The first question is to define the scope of such a work; and to do so is far from easy, for there are terms of many sciences allied to seamanship whose claims to be included at first sight seem strong.

It is clear that all terms relating to seamanship must be admitted; but probably it will be found necessary to leave out many of those belonging to the allied arts. Probably too all that illustrates the building and equipment of ships prior to the introduction of steel and steam should be included, such as shipbuilders', sail-makers', ropemakers' phrases, and so on; but the technicalities of steel shipbuilding, and more especially of steam and motor engineering, would be out of place. So too with the armament of ships. The terms of the old smooth-bore guns seem to be necessary, but those belonging to modern ordnance are out of the question. It is necessary to discriminate thus between admissible and inadmissible terms belonging also to Navigation, Insurance, Hydrography, Fishing, Yachting, and other arts and industries closely connected with the sea.

Further it was stated that "the method proposed to be adopted is philological and historical"; and members were asked "to comment on and criticise this first draft of the proposal, in order that their opinions may be laid before the Editorial Committee."

In response to this appeal very little in the way of comment or criticism was received, most members apparently being content to think that the problem had been satisfactorily defined, and that nothing remained but to get on with the work. And here it may be added that very little in the way of contribution of material followed. Two or three members indeed sent in slips illustrating uncommon usages, and these were filed with the slowly growing collection of instances.

It was recently decided by the Council of the Society that the question ought to be brought forward again; and, as a first step in that direction, I was instructed to put forward a scheme for discussion, being as explicit as possible, and going as far into detail as might seem necessary. The Publications Committee has agreed that, in order to avoid the labour and delay of circulating the resulting scheme privately among those members who are known to be especially interested, it will be preferable to issue it at once in *The Mariner's Mirror* for the comments of the Society at large.

THE SCHEME AS IT STANDS

It has been already stated that by 1911 the project of 1910 for an "Encyclopaedia or Dictionary" had been modified to one for a "Dictionary", which should be "philological and historical." This point was brought before the Council when it discussed the question in 1923, and it was then agreed that the alteration should stand.

And here I am reminded of what Macaulay said about the officers of the Restoration navy. There were, he said, gentlemen, and there were seamen, in the navy of Charles II; but the gentlemen were not seamen, and the seamen were not gentlemen. There was an element of truth in his epigram, enough to give it a bite, but there was also a high degree of overstatement. And the virtue of this quotation "lays in the application of it," which may perhaps fairly be presented thus: There are seamen and there are men of letters among the members of the S.N.R.; but it does not do to assume that the seamen are men of letters, or that the men of letters are seamen.

This consideration imposes the task of describing, for the benefit of such of the seamen as are not men of letters (if indeed any such there be), some parts of the problem in greater detail than would be necessary for a purely literary audience.

The first thing to do is to insist upon the essential difference between a Dictionary and an Encyclopaedia; and this can be done with a perfectly clear conscience because the many nautical Dictionaries of the past (a list of them was published in *M.M.* vol. 1) have without exception been Encyclopaedias. There is not a Dictionary, properly so called, among the lot. The most that can be said for the best of them, such as Mainwaring and Falconer, is that they are to some extent composite, partly dictionary and partly encyclopaedia. But the encyclopaedic part is always greatly in excess of the dictionary part. The difference is perfectly simple: a Dictionary deals with words, an Encyclopaedia with things. One consequence of this is that there are very many nautical words, those which do not connote things or actions, which are not to be found in any of the so-called nautical Dictionaries.

The "New English Dictionary" has set the standard for all future dictionaries. Before going on to speak of the nature of this truly monumental work, it may be as well to mention that, from its place of publication, it is often referred to as the "Oxford English Dictionary"; and that, after its first editor, Sir James Murray, who lived to see by far the greater part of the work completed, it is sometimes called "Murray's Dictionary." It may be thought permissible to remind naval readers that Sir James was the father of Sir Oswyn Murray, with whose name they are probably more familiar. In what follows, the "New English Dictionary" will be referred to as the N.E.D.; but if, as is likely to be the case, other writers quote the O.E.D., it will readily be understood that they are citing the same work under an alternative title.

The N.E.D. is compiled on strictly philological and historical lines. Its full title is "A New English Dictionary on Historical Principles". Its purpose is to trace the origin and history of words. The origin is discovered by carefully noting variant spellings and their dates, and by comparing the results with the forms assumed by the same word in other languages. The history is illustrated by a collection of examples, which show the different meanings the word has had, either in succession or concurrently, and how one meaning has grown out of another.

Inasmuch as the N.E.D. includes all English words, among them the technical terms of the arts, sciences and professions, it might not unreasonably be urged that it has already done all that is necessary for the sea language. When the Council of the Society discussed the matter it did not neglect this point; but it saw two chief objections to considering the N.E.D. as being thoroughly satisfactory for readers of nautical literature.

The first is this: that the N.E.D.—the last volume of which is not yet quite complete—is so vast a work that it is to be found nowhere except in large

libraries. It runs to ten large quarto volumes, containing on an average over 1500 pages each; and each page has three columns of about 100 lines of eight words. It would be a reasonable estimate to say that the whole work contains nearly forty million words of letterpress. It weighs about 200 lb. avoirdupois, costs about £40 sterling, and occupies some 4 ft. of shelf room. From these figures it will readily be understood that it can find no place on board ship, nor in many private houses.

The second reason is due to this: that experience shows that the selection of instances in the N.E.D. is not always exhaustive. Thus sometimes the history of a word is incompletely traced, and occasionally a rare word is omitted. It is no reflection on the N.E.D. to advance this argument, for it is not in the nature of human progress to command perfection. In the next section of this article, which will deal with some of the difficulties of dictionary making, a brief outline will be given of the procedure adopted by the editors of the N.E.D.; and, it is believed, it will be shown how that procedure, admirable for the general purpose for which it was designed, may with advantage be modified or extended for the particular purpose of a specialist dictionary of a limited subject.

After consideration of these points the Council of the Society decided that a serious effort should be made to carry the original project through. It agreed that both an Encyclopaedia and a Dictionary are needed; but while admitting that an Encyclopaedia would probably be the more popular undertaking of the two, it recognized that the great extent of research work still to be done before such a book could be satisfactorily compiled put it out of court for the present. A Dictionary, on the other hand, would be a useful preliminary to such an undertaking; would, if it could be produced in moderate bulk and at a reasonable cost, be of great use to students of sea literature; and consequently the Council decided to advise that the Society should in the first place give its attention to the production of a Dictionary of the English Sea Language. It approved the proposal that a definite project should be drawn up, and a scheme prepared whereby the collaboration of members might be secured.

DIFFICULTIES OF THE SCHEME

The preliminary difficulty of making a dictionary lies in the collection of the requisite raw material, which consists in illustrative excerpts from printed and MS. sources. Though one man in the course of several years can, if his interest in the task does not flag, make a very considerable collection of instances, yet it is obvious that he cannot collect as many as ten men could, still less than as fifty or a hundred could in the same time. The inference is

plain. The work of collecting instances must be done by collaboration, which postulates organisation.

The N.E.D. proceeded in this way. Having enlisted the services of a number of volunteer "readers," who undertook to read books for the purpose of collecting suitable examples of the use of words, it next drew up a list of books to be read. These were assigned to the "readers"; and thus, after some years of preparation, a large flow of instances began to come in. The highest number of instances collected by one "reader" was over 165,000, while a few other contributors sent in over 50,000 each, and many supplied over 10,000 each. When this enormous mass of material was co-ordinated—in which process inevitably a great many duplicates were eliminated—it was found that considerable gaps still existed. It was the business of the editorial staff to supply these gaps either from its own knowledge and research, or else by application to such individual scholars as were likely to be able to help. In either case the process was often slow and difficult: many days and much labour were frequently spent on the acquisition of material which, when completed, could be presented in a few lines. The length of an article in fact affords very little indication of the amount of labour involved in compiling it.

It is essential that the S.N.R. should follow the example of the N.E.D. It must proceed to the collection of instances by collaboration; and it must make very definite rules for the guidance of contributors. The following steps are clearly necessary:

(1) To invite members to volunteer their help in reading books or MSS. and collecting instances.

(2) To compile a list of books which ought to be read for the purpose, and to assign them to the "readers."

(3) To issue detailed instructions to the "readers," especially as to what terms should be included and what excluded, and as to the form in which instances should be contributed.

(4) The appointment of the editorial staff necessary to co-ordinate and complete the material thus collected.

It will be noticed that of these steps Nos. 1 to 3 are preliminary, while No. 4 can be postponed until a representative collection of instances has been made. Also Nos. 1 to 3 can be undertaken immediately by the Publications Committee; whereas No. 4 involves action by the Council. It may be assumed that when the Publications Committee thinks that the preliminary work has advanced far enough to make the appointment of an editor or editors desirable, it will report accordingly to the Council.

Such a Dictionary as is contemplated would be a big task; in proportion to the membership of the Society perhaps a bigger task than the compilation

of the N.E.D. was to its founders and editors. As a warning to enthusiasts who may expect Rome to be built in a day, it is worth mention that the scheme for the N.E.D. originated in 1857; that arrangements for printing and publishing it were made in 1879; that the first volume was completed in 1888; and that the tenth and last volume is now well advanced. All told, from project to completion, the N.E.D. will have occupied all but seventy years. Fortunately we do not need to contemplate so great an expenditure of time; but it is as well to recognise that the preliminary work will take a good deal of time, and that until it has been satisfactorily done, publication will not be able to start.

A few hints about "reading" books for dictionary purposes may be welcome. The first point is to decide whether a book is likely to give useful instances. Quite probably it may not. For example, a modern biography of a naval officer of the eighteenth century would be useless in itself; but it might contain valuable quotations from contemporary documents.

Another point of great importance is to consider what is the authority of the author. Did he really understand sea-speech, either as a seaman himself, or as a man closely associated with seamen? Or was he a mere amateur? It will be noticed that the N.E.D. does not always distinguish closely between the professional and the amateur; so that among its instances there are a good many which do not add any weight to the argument they are designed to support. The S.N.R. must choose its instances from seaman authors, leaving the poets, the preachers, the philosophers and the journalists on one side.

Perhaps the greatest difficulty in "reading" books for a dictionary is to know what words to choose. Remember that all sea words and phrases have to be illustrated, at all periods of their history. It is often quite easy to deal with a queer looking word of limited use. Commonly the most difficult words are those in everyday use. They have a habit of having many shades of meaning, which keep changing in the course of the centuries; and in any case, as everything must have a beginning, it is necessary to look out for very early instances of common words. And the further back we go in point of time, the more valuable become the instances, for they take us to a period when spelling was not standardised. It will always be important to give the exact spelling of the original; for by a comparison of different spellings words are traced to their origins.

Every "reader" is likely to devise a system suitable to himself; but I may perhaps be permitted to describe my own method, in case it may contain some details which might be useful to others.

The first point to be attended to is to devise a method which will not distract the attention much. If you are going to knock off reading every

few minutes to make a long written note of a passage, you will find that in looking for particular sorts of trees you are entirely losing sight of the wood. You will get to the end of a chapter, having collected perhaps half a dozen quotations, and will have the foggiest idea of what the chapter was about.

This difficulty can be avoided by reading always pencil in hand. As a phrase suggests itself for quotation, make a small tick in the margin: and give any doubtful cases the benefit of the doubt. When you have done reading, then you can go over the same ground again to take out the instances you have marked. One thing I always find is this; that however often I read a book, I may always expect to find a new quotation from it. In many of my books I have noted on the flyleaf the pages on which quotations occur. This in fact is an essential plan if you cannot find time to copy out the quotations. But having read a book, and having accumulated 50 references on the flyleaf, if you read the book again a few months later, you will collect another twenty, and if you read it a third time later still, you will probably collect another ten.

It may perhaps be advisable for volunteer "readers" to attempt to specialise in short periods. For instance, one might well take Hakluyt and his contemporaries; another Dampier, Shelvocke, etc.; another Cook. One soon gets to know the language of a limited period so well as to develop a flair for anything worth noting.

As all slips of quotations will have to be filed, it will be greatly preferable to have them all of the same size. For many years past I have been using a sheet 7 in. \times $4\frac{1}{2}$ in., the size of a half sheet of notepaper, and have found it very convenient. The Publications Committee may perhaps think fit to recommend the use of this size, and to give an illustration of one slip as a sample.

The method of compilation aimed at will be best shown by the treatment of a sample word; and because a common word usually offers the greatest number of difficulties, a nice everyday word has been chosen for the purpose. It will be seen that many more quotations are needed to complete the article.

Board. *Sb.* (*History of forms.*) The N.E.D. shows that the form in the eleventh century was *Bord*, which corresponded to two Teutonic words identical in form but different in gender and meaning. Of these (1) means "Board or plank," (2) means "Border, rim, side, ship's side." (3) In English, as in some other Teutonic languages, these two words were confused, at an early date. (4) From the Teutonic (2) was adopted into the Romanic languages, and from about 1150 onwards French uses of it influenced English.

[*Note.* The foregoing short paragraph is a summary of the N.E.D.'s learned article on the word-forms and their history. If the S.N.R. should be so fortunate as to gain the assistance of a competent philologist, it might be possible to add something to such word histories as still remain obscure. But in general it may be suggested that a very brief history of the word-form should suffice for our purpose. The few members who wish to know more on this branch of the subject

are likely to be those who already have the N.E.D. within easy reach. Almost certainly the great majority of nautical readers will be chiefly interested in the development of the meanings of words, and in quotations showing what is correct usage.]

(*History of Meanings.*)

I. A board of wood: especially a thin plank.

This meaning is not primarily nautical, but has a nautical meaning in a few special combinations, as *arch-board*, *back-board*, *hatch-board*, *log-board*, *wash-board*.

1511. He clasped me to his arch-bord. *Sir Andrew Barton*, st. 23. The hache-bord... is hached with gold deerlye dight. *Ibid.* st. 36. He caused his body to be taken downe, and over the hatch-board cast into the sea. *Ibid.* st. 70. [The identification of both *arch-board* and *hatch-board* is uncertain. It meets the sense to assume that *arch* = "curve," so that *arch-board* would = later "sheer-strake"; also that *hatch-board* is a mere corruption of *arch-board*; or possibly that *hatch-board* means the "border" or edge of the "spar-deck," which in the sixteenth century was commonly called the "hatches." But these are problems for a philologist.]

1621. To leave a land on *back-board* is to leave it astern, for the back board is that which in boats we lean our backs against. Mainwaring, *Seaman's Dict.*

Also "board" for "log-board." **1825.** Considerably more than 100 miles on the board at 8 this morning. *Jno. Cunningham's Jnl*, 9th Feb. **1833.** Heave the log and mark the board. Marryat, *P. Simple*, xii. "Wash-board" = "Wash strake": **1867.** A movable upper strake on the gunwales of boats to keep out the spray: also fitted on the sills of the lower-deck ports. Smyth, *Slrs Word-Bk*. "Wash-board" in this sense was also used fig. for the white lappels of the old naval uniform. *Ibid.* Perhaps also "arch-board," in the sense: the part of the stern over the counter, immediately under the knuckles of the stern timbers. *Ibid.*

II. A table: hence, a table at which a council is held, and hence again the company of persons who meet at a council table. *E.g.* "Board of Admiralty"; "Navy Board."

III. A shield. Not nautical: though in early ships shields, and afterwards pavesses, were attached to the gunwale, it does not appear that the term "board" in its connection with the ship's side, ever refers to them.

IV. The border or side of anything.

(a) A coast. Obsolete, except in *seaboard* = sea coast.

1898. A long seaboard with numerous navigable watercourses. Mahan in Clowes' *R. Navy*, III, 353.

(b) Direction, quarter, airt.

1580. We rid two leagues a sea-bord the barre of Santos. *Hakt.* xi, 37. **1722.** The wind freshened... from the North-North-West board. G. Roberts, *Four Yrs Voyages*, 115. **1779.** A fleet was discovered in the Eastern board. *Fanning's Narrative*, 33.

V. The side of a ship. (See *Aboard*.)

Now obs. save in phrases, as *within board*, *inboard*, *without board*, *outboard*, *overboard*; and in combinations, as *Freeboard*, *Larboard*, *Starboard*, *Weatherboard*.

(a) N.E.D. shows that *Within board* and *Without board* were probably the earliest of these, dating back at least to 1000 A.D. c. **1435.** Then cometh our owner... and dresseth him to the hygh borde. *Pilgrim's Sea Voy.* st. 8. **1513.** Oon that lept into my galye... I cast over borde. *N.R.S.* x, 149. **1621.** The weather board, that is to say, to windward. Mainwaring, *Seaman's Dict.* **1920.** Boats carried outboard in davits. (Tech. press.)

(b) N.E.D. gives *by the board* as a separate heading = (down) by the ship's side, overboard, as to *slip by the board*, "to slip down by a ship's side" (Smyth). *To come, or go by the board*, to come overboard, to go for good and all.

[This seems to demand that "by" = "near": but if we take "by" as elliptical for "by way of," there remains no essential difference between (b) and *overboard* in (a). Again, the decision is for philologists.]

1652. Had his foretopmast shot down by the board. *N.R.S.* xxx, 95. **1748.** Her fore topmast came by the board. Walter, *Anson*, III, i. **1842.** Our main mast had fallen by the board. Marryat, *P. Keene*, xix. **1912.** Policies may have to be modified, and perhaps to go altogether by the board. Mr Asquith at Guildhall, 9th Nov.

(c) *On board*: on one side, close alongside (of a ship or shore); also as *prep.* short for *on board of*. *N.E.D.* (cf. **Aboard**). (Also, "to the side of the ship," as in the phrase "to haul, get, the tacks on board" in sixteenth cent.) **1652.** He laid the Garland on board. *N.R.S.* xxx, 151. **1796.** They did not see the land till close on board of it. Tucker, *St Vincent*, I, 247. **1797.** The S. Josef and S. Nicolas having fallen foul of each other, the Captain laid them on board. Tucker, *St Vincent*, I, 287.

(d) *Board-a-board*, from French *bord à bord*=side by side. Early corrupted to *board and board*. *N.E.D.*

1616. In chase they desire as soon as they can to come a board and board. *N.R.S.* LVI, 24. **1652.** The Garland was, after a hot fight board and board, carried by them. *N.R.S.* xli, 91.

(e) *On board*, besides the technical sense in (c) has now in common use the meaning: on or in a ship, boat, etc.; into or on a ship. That this expression is elliptical is witnessed by the fuller form *on shipboard* (Mid. Eng. "Within shippe burdez"), and the construction "on board of the ship," or "on board the ship," where it is perhaps often supposed that "board" means the *deck*.

On board appears to be a later expansion of **Aboard**, *a-board*, and this to have been taken directly from the French *à bord*, in which *bord*, "ship's side" comes to be equal to "ship" itself. Although *on borde* occurs poetically in Old Eng., and *upon borde* in Mid. Eng. (see quot. c. 1360 below) in the sense of "in, upon ship," these appear to have no historical connection with the later *a-board*, which begins about 1500, and *on board*, which appears late in the seventeenth cent.

[Thus *N.E.D.* But this article does not show, what is indisputably the fact, that "on board" has now, and has had for very long, a precise technical meaning when used in this sense. Thus a man goes "on board (of)" a ship; and may be said to be "on board (of)" a ship to which he does not belong. If he belongs to her, he will commonly be said to be "in" her, whether actually "on board" at the moment or not, though in this sense "on board" is also recognised usage. Any person, whether belonging to a ship or not, is also said to be "on board" when actually present, in contradistinction to being "out" of the ship. "On" a ship, in this sense, is of very recent introduction, only an occasional instance being discoverable before about 1870: it is still unrecognised in the R.N., its use being almost entirely confined to the merchant service, many senior officers of which do not approve of it; to the U.S.A., where also its introduction is comparatively recent; and to people ignorant of the sea language (see *M.M.* II, 275).]

c. **1360.** Brogt him up. . . and upon borde sette. *Patience*, 190. **1706.** On board the Prince George, 28th Nov. *N.R.S.* LIII, 137. **1708.** I have ordered him to take on board provisions. *Ibid.* 292. c. **1750.** His flag was flying on board the Albemarle. *Ibid.* 148. c. **1793.** They sent him on board of the Conquistador. *N.R.S.* xxxi, 214. **1835.** Took the captain on board the Lagoda. Dana, *Two Yrs before the mast*, xv.

[In these instances "on board" is used in three ways. "On board of" a ship, where *board* is a *sb.*; "on board" a ship, where *on board* is a *prep.*; and "on board" without mention of a ship, which makes it an *adv.* This sense has also been transferred to ordinary speech, esp. in U.S.A.: thus "on board a train, bus, etc."]

(f) Of sideways direction, in reference to the ship's course; the course of a ship when tacking. *To make boards*=to tack.

[Thus *N.E.D.*, "sideways" presumably referring to the course with reference to the wind. From the examples the meaning is clear, but it is not so clear how the word came to have that meaning. Conceivably, it arose out of the phrase "to sail with the starboard, larboard, tacks on board"; and it is in favour of this supposition that "board" in this sense is only used of sailing close hauled, or, as *N.E.D.* loosely says, of "tacking."]

1513. If we coud have wynd to lay itt on a bord. *N.R.S.* x, 122. **1621.** *To make a board*, or as we say, *to board it up* to a place, is to turn to windward. . . in which note that the farther you stand off upon one point of the compass the better board you shall make; and it is better making

long boards than short boards. Mainwaring, *Seaman's Dict.* (To "board it up" is now obsolete.)

VI, VII. These headings in N.E.D. are not *naut.*

VIII. (Not in N.E.D.) The act of boarding in a hostile manner. **1830.** There's board. Hurrah! Marryat, *King's Own*, xxxi. **1836.** There's board in the launch—give way, my men, give way. Marryat, *Mid. Easy*, xxii. **1836.** Resolved to try her by the board. *Ibid.* xxix.

Board. *Vb.* [from preceding *sb.*].

1. *Trans.* (a) To come up to, or alongside, a ship usually for the purpose of attacking; to lay on board, to fall on board of. **1511.** You may bord yonder noble shipp. *Sir Andrew Barton*, st. 67. **1512.** The Regent bordyd the gret caryke of Brest. *N.R.S.* v, 49. **1614.** Twenty men upon the defences are equal to 100 that board and enter. Raleigh, *Hist. World* (1736), II, 565. **1628.** I boarded her on the starrebord quarter with my shippe, and I entred about 60 men. *Jnl of Sir K. Digby*, 19. **1744.** That night (11th Feb.) our ship (the Marlborough) was in perpetual apprehension of being boarded by some of the enemy's fireships. Charnock, *Biog. Nav.* IV, 134.

(b) To go on board of, or enter, a ship, usually in a hostile manner. [There was a long period of transition, reaching into the eighteenth century, in which though "enter" was the common phrase for the entry of men into the ship attacked, yet "board" was also used in the same sense. N.E.D.'s earliest instance of "board" in this sense is 1494.]

1652. My men boarded her, where we fought it out at pike's end. *N.R.S.* xxx, 100. **1748.** Impossible to board or cut out any vessel protected by a force posted on shore within pistol shot. Walter, *Anson*, II, iii. **1815.** "Now, my lads, we'll board." *Ballad of Brave Broke*.

†(c) To board with—to lie side by side with for purpose of attack. *Obs.* N.E.D. gives the following instances: **1460.** All the King's Navye schall not suffice to bord with Caryks. **1622.** (Rd Hawkins.) The vice-admirall bourded with us.

2. *Trans.* To go on board of, embark on. [Common, but no instances collected.]

†3. *Trans.* To put up or take on board ship. *Obs.* **1593.** Boarding and stowing our provisions (from N.E.D.).

4. To bring to the ship's side, especially of the tacks. **1835.** "Board the main tack," cried the captain. Dana, *Two Yrs before the mast*, xxiv.

5. *Intrans.* To sail close hauled, also to beat to windward. N.E.D. quotes Smith's *Seaman's Grammar*, 1627 and 1692, but this in the main is copied from Mainwaring, *Seaman's Dict.*, **1621**, which has "To make a board, or as we use to say *To board it up* to a place, is to turn to windward." Also, *To board to and again*.

Boarding. *Vbl. sb.*

1. The act of coming close up to, or entering, a ship usually in a hostile manner.

N.E.D. quotes Raleigh, **1591**, "The voleis, boardings and entrings." **1743.** Getting her sprit-sail yard fore and aft, that she might be ready for boarding. Walter, *Anson*, III, viii. **1743.** She was particularly provided against boarding, both by her close-quarters and by a strong network. *Ibid.* **1770.** We had only 2 or 3 men wounded in boarding. Laughton, *Nelson Mem.* 9 (1896).

†2. The act of sailing on a wind, *i.e.* with the tacks on board, or "making boards." *Obs.* N.E.D. quotes Raleigh, **1618.** That she may stay well when boarding and turning on a wind is required.

3. In combinations, as *Boarding-book*, *-bridge*, *-cap*, *-netting*, *-pike*, etc.

1714. The Tsar ordered boarding bridges to be fixed with hinges to the gunwale of every ship. *N.R.S.* xv, 28. **1824.** Their boarding-cap is of helmet form. *M.M.* ix, 335.

Boarding. *Participl. adj.*

That boards a ship. **1829.** The boarding party. Marryat, *F. Mildmay*, v.

Aboard. *Adv. and prep.* See s.t. **Board** for the history of forms. *Aboard* appears to be chiefly due to the French *à bord*, and is therefore a relatively late arrival in English. The form *on board* seems to have grown out of *aboard* after its French origin had been forgotten.

(History of Meanings.)

A. *adv.* 1. On board, within a ship.

(a) Position in a ship. **1621.** When we use the word aboard at sea, it is as much as to say within the ship. *N.R.S.* lvi, 101. (Mainwaring, *Seaman's Dict.*)

c. **1800.** I've got sailing orders. You Sir! stay aboard. *Cawsand Bay.*

(b) Motion into a ship.

1600. Went aboard into a galley. *N.E.D.*

c. **1800.** Ran down the ship's side for to help her aboard. *Cawsand Bay.*

2. Alongside, on one side of a ship or shore.

(a) **1494.** The Turkes brought them (barges) a bord where the host lay. *N.E.D.* **1550.** They came to aborde in the port. *N.E.D.* (which, however, places this instance under a separate heading). **1907.** We could see the rocks as the island drew aboard. Richards, *Deep-water ship*, 91.

(b) To lay a ship aboard, is to place one's own ship alongside of her, commonly to fight with her.

1588. Keeping thwarte her head we laid her aboard. *Hakt.* xi, 334. **1702.** The Torbay had been laid aboard by a French fireship. *N.R.S.* ix, 233. **1835.** "Capt. T. has come aboard, Sir." "Has he brought his brig with him?" Dana, *Two Yrs before the mast*, xv.

(c) To fall aboard: of a ship, to strike its side, fall foul of it.

1700. The Severn in winding fell aboard this ship. *N.R.S.* ix, 23.

(d) To haul, get, bring, the tacks aboard; and of the tacks, to be aboard—i.e. brought down to the ship's side.

1549. Hail doune the steir burde lufe hard a burde. *N.R.S.* xl, 48 (*Complaint of Scotland*). **1621.** Bring the tack close aboard, that is, pull down the tack close to the chess tree. *N.R.S.* lvi, 101. (Mainwaring, *Seaman's Dict.*)

B. *prep.* By omission of *of* after the adverb.

1. On board of a ship.

(a) Of position.

1588. From aboard H.M. good ship the Ark. *N.R.S.* i, 79.

(b) Of motion.

1653. Went aboard the admiral. *G. Penn.* i, 522.

2. Along, by the side of. To fall aboard anything—to fall aboard of it. [*N.E.D.* marks this usage as obsolete.]

1588. Sailing close aboard the shore. *Hakt.* xi, 334. **1835.** They lay on their oars when close aboard us. M. Scott, *Cruise of Midge*, xxii.

There are a few other words which might be taken into account were completeness aimed at: for instance *Disboard*, which occurs in 1652, "He resolved to board, but found such a hot dispute that he was glad to dis-board" (*N.R.S.* xxx, 189). What has been offered will, however, suffice to show the nature of the task, the method of treatment proposed, and the need of help. It need not be supposed that all words will need such lengthy treatment as *Board*: it is indeed doubtful whether there are a dozen other such difficult words in the whole nautical vocabulary.

SOME EARLY ACCOUNTS OF THE ORIENTAL BOAT

By A. H. Hill, M.A., D.Phil.

THIS article invites attention to notes made by certain European writers on boats in the early days of trade expansion in the East. Their remarks on the construction and use of the native vessels they saw in the sixteenth and seventeenth centuries are not as well known as they deserve. My choice of authors may be questioned. An apothecary with a bent for accountancy, a civil servant with a flair for languages, a merchant with a taste for sketching, these are the main three. They are greenhorns in matters maritime. It is a mere accident of literary heritage that the information they have given is readable and interesting, and throws light on the history of boats and boat names.

Their observations I have quoted in the words of their modern editors. Where possible I have amplified these in extracts from other sources, contemporary or nearly contemporary, known to me. The opinions of modern writers I have given only in so far as they illustrate what the original sources say; or, significantly, what they omit. No exhaustive account of any boat type is given. Those looking for material for a definitive classification of eastern boats must be disappointed.

All the boats with which we are concerned have been found at some period of history in an area comprising the Bay of Bengal and the continental shelf of Malaysia. The great variety of types found in this area parallels other sharp ethnological differences. But little is known about what an American anthropologist has called 'waves and periods of migration, the members of which were rather similar in physical type', which produced 'subgroupings with much in common yet presenting important contrasts'.⁽⁴⁾ In South-East Asia the continuous record of history begins late, not much more than 1000 years ago. Writing itself is of no great antiquity. The classics of native literature offer material too confusing, too tinged with mythological elements, to be of any value to those in search of information on the early evolution of boat designs. For the 'Middle Ages' written sources of information fall into three groups:

(1) Native sources, mainly in Java and Malaya. These are fragments of dynastic history, or rather eulogies of the virtues of semi-divine rulers, whose fleets are always 'in numbers past counting'. Cf. ^(3a). Dr C. C. Berg has shown how unreliable such historiography may be.⁽²⁾

(2) Peripheral sources, mainly Chinese annals. These give dates and information about embassies to and from the Peking court, and some geographical details of interest to mariners; but they contain no ethnological material.

(3) European and other 'foreign' sources. The writers were explorers, traders, missionaries, merchant seamen. Followers in the wake of Vasco da Gama took 300 years to produce scholars of the calibre of Marsden and Crawfurd.

In the third group, with which this article is mainly concerned, the material on sea and river craft is scanty. Surprisingly few of the itinerant seafarers whose manuscripts have been published seem to have taken any notice of native boats. It is outside the scope of this article to discuss, except by implication, a question that is often asked, How far is boat design a reliable symptom of cultural heritage? True, the over-riding purpose of a boat, as of an egg-cup or a tea-pot, is functional. It must be beamy to stand up to wind and weather, or high in the water to be easily beachable during the monsoon, or raked to make headway against river currents, or flat-bottomed to cross the shallow waters of a lake. But even in the case of a primitive people who, for instance, fish to maintain themselves at the bare level of subsistence, boat design is never determined solely by the accidents of their environment. Features like the oculus, the *surul* (20a), the *bangai* (see (8), Malay *bangau*, egret; a high, curving spar-rest) are of definitive value to the ethnologist.

Duarte Barbosa came of a Portuguese family in the service of the Duke of Braganza, which had had connexions with India since the time of Vasco da Gama. He reached Cochin, c. 1500, where he worked with his uncle for two years before being appointed to Cananor. He soon became an expert in Malayalam, the language of the Malabar coast, and was interpreter with diplomatic missions to the rulers of Cochin and Cananor. The Viceroy Afonso D'Albuquerque commissioned him in 1515 to go to Calicut to superintend the building of two galleys. The work accomplished he retired to Portugal and wrote his story.⁽¹⁵⁾ A year or two later he sailed with Magellan who was his brother-in-law and life-long friend. A few days after the massacre of his leader Barbosa himself met the same fate at the hands of the Cebu islanders.

Writing of the coastal traffic of Travancore, Barbosa says: '... They make use of small rowing vessels like a *bargatim*. They are great oarsmen and a multitude of them gather together all armed with bows and arrows in plenty, and thus they surround any vessel they find becalmed, with flights of arrows until they take and rob it. Those who are taken therein they put ashore. Thus with these boats of theirs which they call *catures*, they take

much spoil. . . .’^(16a) And of the Maldivé Islands ‘. . . they build many great ships of palm trunks sewn together with thread, for they have no other timber, and in these they sail to the main. They have keels and are of great burden. They also build smaller boats for rowing, like *bargantins* or *fustas*. These are the most graceful in the world, right well built and extremely light.’^(16b)

Barbosa never went farther east than the Bay of Bengal. But Portuguese sailors brought him back accounts of boats seen in the Straits of Malacca. ‘From the Kingdom of Jaoa (Java) also come the great *junco* ships to the city of Malacca, which differ much from the fashion of ours, being built of very thick timber, so that when they are old a new planking can be laid over the former [so that there are three or four layers of planks one over the other] and so they remain very strong. The cables and all the shrouds of these ships are made of canes [rattans] which grow in the country.’^(16c)

This is an early reference to the junk of the Far East, also mentioned by Tome Pires (see below). It occurs in the accounts of a few fourteenth-century writers, Fr. Odoric, Ibn Batuta, Marignolli.^(19d) The big ship which ‘carries from three up to twelve sails made of bamboo slips woven like mats’⁽²⁵⁾ is too well known to need description. Sir Henry Yule’s view that *junk* is derived from Malay *jong*, large vessel, has been generally accepted.⁽¹⁴⁾ Fr Jordanes, Nicolo Conti and Ibn Batuta all allude to the construction of these ocean-going ships with two or more skins of planking.

Bargatim or *bargantin* is apparently not the modern brigantine, but a light rowing boat of shallow draught used along the Mediterranean coast. The Portuguese would have been familiar with it.

Barbosa’s use of *catur* for a fast rowing boat is interesting. That censorious globe-trotter Ludovico di Varthema (c. 1507) has written of vessels ‘made of one piece. . . sharp at both ends. These ships are called *chaturi* and go either with a sail or oars more swiftly than any galley, *fusta* (foist, a rowing boat common in the Bay of Bengal) or brigantine’.⁽¹¹⁾ The name must come from an Indian source, possibly Sanskrit *chatura*, ‘swift’. But Varthema’s mendacity is too well established for reliance to be placed on any of his words. A more likely derivation is from Malayalam *kattiri* (Skr. *kartari*, scissors or cutter), a word with which Barbosa would be familiar.^(11c) *Catur* does not occur anywhere before the fifteenth century. The English ‘cutter’ emerged as an Anglo-Indian word two centuries afterwards. First mention of it is probably in Anson’s *Voyages*, c. 1742. Under various spellings the name is used to-day in many parts of South-East Asia. At Tumpat and in the Kelantan River estuary of north Malaya it is applied to a single-masted sailing boat for cargo-carrying, with sharp bows and a fairly narrow beam. The *katar*, or

luang katar has no bowsprit and the sail is stepped well forward. A cabin is mounted over the stern.⁽⁶⁾

Tome Pires saw on the Malabar coast '*tones catures*, which are long rowing boats, covered over on top, leaving just room for a man to worm his way in. Each one of these takes ten to twenty oars. They are light, and there are a great many of them, and archers go in them.'^(11d) Pires (c. 1468-1540) was, unlike Barbosa, a man of humble birth whose qualities led him to wealth and high social status. Like his father an apothecary, he spent his early life in Lisbon in the service of Prince Afonso. In 1511 he went to India, but eight months later D'Albuquerque sent him to Malacca as 'controller of the drugs, scrivener and accountant of the factory'. There he wrote the greater part of his *Suma Oriental*, by far the best and fullest of the contemporary Portuguese accounts of South-East Asia. He finished it in Cochin in 1511, while waiting for a ship to Portugal. But he was persuaded to go as ambassador to China, which he reached in 1517. After an abortive journey to the court of the Son of Heaven at Peking he was imprisoned at Canton and afterwards banished to a town on the banks of the Grand Canal where he lived, an exile more or less under arrest, for about fifteen years. His writings on China have all been lost. The *Suma Oriental* disappeared for four centuries, until it was found in, of all places, the library of the Chamber of Deputies in Paris.^(18a)

In the same account Pires speaks of *tones*, and once more of *tones catures*, apparently in reference to passenger craft also used for fishing in the wide river estuaries of the Malabar coast.^(18b) His translator says, I do not know on what authority, that *tone* or *tona* is a small boat with a sail and oars used in Southern India. Pires was no waterman as Barbosa was. The names he gives for the boats he saw are all transliterations into Portuguese or equivalent words. Some of them sound exotic, and it would be interesting to have them more fully explained. In his notes the translator has little information to offer. Pires saw *ladas*, which may mean 'ships of shallow draught', in use along the narrow reef-ridden channels of Adam's Bridge, the island-studded strait which separates India from Ceylon; and *pagueres* which were 'ancient cargo boats in southern India, often mentioned by the chroniclers'.^(18c) (See below: Peter Floris.)

In 1513 Pires paid a visit to Java as factor of a fleet of four ships sent from Malacca to fetch spices. In the port of Gerisek he met *Pate Cucuf*, the chief merchant. 'He must be about fifty years old. There used to be many junks and many cargo *pangajavas* in his port; now there are none. He has many *calaluzes* and *naviotes* for raids, as have the other *pates* of Java, all of whom have a large number of *calaluzes*, but they are not fit to go out of the shelter of the land. They are carved in a thousand and one

ways, with figures of serpents, and gilt; they are ornamental. Each of them has many of these, and they are very much painted, and they certainly look well and are made in a very elegant way. . . they are rowed with paddles'.^(18e) For Malay and Javanese nobleman trading and piracy were often complementary occupations. In South-East Asia the dragon-boat, used mainly at regattas and for ceremonial purposes, is of very great antiquity. A fine one belonging to the Sultan of Kelantan is on view at the Balai Besar, Kota Bharu. The ornamental racing *perahu* of the Banda Islands, 'its bow painted with a great dragon's head and scales', is well described by Ponder.⁽²⁷⁾

Also in the category of fast inshore craft comes the *fusta*. Varthema's reference (above) to its use in South-East Asia is an early one, if not the earliest, from a European source. During the next two centuries it figures regularly in contemporary English and Dutch records, under various names *foist*, *foyst*, etc. Nowhere among them can I find a good description of this type of boat. But I think the name must be a Portuguese or Spanish one for a purely European-type boat; and this is true, no doubt, of some of Pires's boats. Support for this view comes from an unexpected source, the *Sejarah Melayu*. The *Malay Annals*, the chief native source for the history of the Malacca sultanate, was written by an educated Malay in Malacca not long after the Portuguese occupation. Its style is episodic. One story concerns Sultan Abdullah of Kampar who refused to acknowledge the overlordship of the dispossessed ruler of Malacca. When the exiled king threatened reprisals the Sultan appealed to the Portuguese in Malacca, who came to his aid with 'ten *foysts* and five brigantines' and beat off the Malay fleet. Sultan Abdullah thanked the Portuguese commander and 'went aboard a *foyst* of the Franks to see what a *foyst* was like. Forthwith the Franks bound Raja Abdullah and the *foyst* set off downstream, to the amazement of the people of Kampar'.^(3b) In the romanized transcription the Malay text has *fusta*,⁽²⁹⁾ which is definitely not a Malayo-Polynesian word. Mr C. C. Brown's translation correctly reflects the sense of the original, with its implication that the sea-faring chief of a small coastal territory in Sumatra, who would surely be familiar with all native craft in the Straits of Malacca, had never before seen a *fusta*.

We now turn to some records left by merchant seamen, English and Dutch, of the next century. Gone for ever were the old crusading days when two European powers, pioneers in exploration by sea, could agree by treaty to leave the other in undisputed possession of half the world in the name of Christendom. It was trade, the lure of quick and fabulous profits, which sent men like Antheunis, Saris and Middleton round the Cape of Good Hope. Their diaries and letters are full of commercial agreements with local

rulers, of bargaining for cloth and spices in 'bazaars, of trade routes and charts and islands. Their interest in native culture was largely confined to things which could be sold in London and Amsterdam. Few of them found anything worth saying about boats.

In 1611 Peter Floris, a Dutchman who with Lucas Antheunis had led the seventh Voyage for the East India Company, was a factor at Masulipatam. His story records that in the harbour he saw 'a *pagell* going for Tenasserim'.^(17b) This must be the same as Pires's *pagueres* and do Couto's *pagueis*. The name is perhaps cognate with Arabic *bakala*, a large cargo vessel of the Red Sea, or Persian *bajra*. A century of Anglo-Indian influence corrupted it to *buggalow*^(19a). On its voyage northwards up the Coromandel coast Floris's ship *The Globe* passed St Thomas's Mount where 'wee mette a masull . . . and being desirous to heare some newes from the shoare wee manned our *pinasse*, myselfe going in her. Comming towards theym, they began to shoote, and though we shewed theym all tokens of friendshippe, yet woulde not they beleeeve us, butt shotte still att us, so that a muskett bullett flewe over my head; whereupon I commanded to enter and use theym in hostile manner, the which being done accordingly, they had enough to doe to save theyr lyves; but I brought theym aboard and, after consultation had, wee did release theym and all theyr goods; during which tyme wee came before St Thome, whereat roade a *navette* with some *masulls* and *tselitones*'.^(17a) Pinnace at this time usually meant a small sea-going ship; but sometimes, as here, a small pinnace was carried on a ship. *Navette* is Portuguese *naveta*, a sea-going vessel. *Tselitones*, or more often *celytones*, were harbour boats. There are several reliable sources of information on the seventeenth-century *masula* (see below), the best being in Thomas Bowrey's journal which has been published by the Hakluyt Society under the title *Countries Round the Bay of Bengal*.

Little is known about the early life of Thomas Bowrey (c. 1650–1713). He may have been one of a family of naval men whose home was in Stepney. But why he chose to go to India, or even whether he travelled as passenger or crew, is not known. He reached Fort St George in 1669. The next nineteen years he spent in India and South-East Asia as a private trader, chiefly in pepper. He was never an employee of the East India Company. He belonged, in fact, to a class of small profiteer whom John Company only tolerated provided they kept their commercial ventures within strict limits. He visited ports in the Bay of Bengal, and made more than one voyage farther east to Achin, Batavia and Borneo. By 1685 he was in command of a ship, the *Borneo Merchant*, in which he carried cargoes of pepper for sale to the Company. In 1688 the explorer Dampier found him living in his own house at Achin. The following year Bowrey returned to

England. He never again went east of the Cape, though he may have visited the coasts of Africa and America between the date of his marriage (1691) and his death.^(13a)

Of Thomas Bowrey's manuscripts only one, his *Dictionary of English and Malayo*, written during the long voyage home, was published during his life-time, in 1701. His other extant work, the *Account* edited and produced by the Hakluyt Society in 1903, covers the first ten years only of his life in India, i.e. 1669–79. The style of the *Account* is inconsistent and unidiomatic even for his times. Yet it reveals an enquiring mind and powers of observation equalled only by the writer's business acumen. Bowrey illustrated his narrative with many drawings of the things he saw: pagodas, fakirs, animals, trees, boats. Some of his pictures have an amateurish, lop-sided look about them. Yet Mookerji has used them as a proper source of information on Indian shipping of the Muslim period.^(26a)

To make reference easy I have used, in the list of Bowrey's boats which follows, modern spelling for the names he gives them.

(1) *Masula* (Fig. 1)

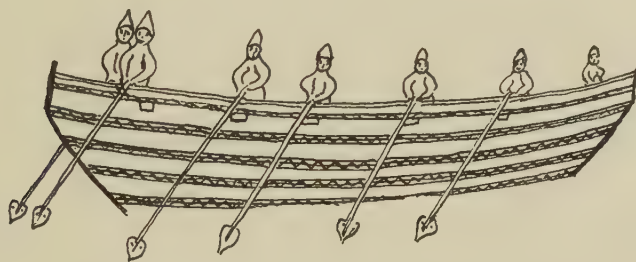


Fig. 1

[Floris's *masull*.] 'The boats they (of the Coromandel coast) doe lade and unlade ships or vessels with are built very sleight, haveinge no timbers in them, save thafts (thwarts) to hold their sides together. Their planke are very broad and thinne, sowed together with cayre (coir), being flatt bottomed and every way much deformed. . . . They are so sleightly built for conveniencies sake, and realy are most proper for this Coast; for, all along the shore, the sea runneth high and breaketh, to which they doe buckle and alsoe to the ground when they strike. They are called *Massoolas*, and are for little use save carryinge of light goods (as bailes of callicoes or silkes, not exceedinge 6 or 8 at one time).'^(13b)

Designed primarily as a surf-rider the *masula* has been used for centuries as a lighter at anchorages and a cargo-carrier in sheltered waters. Under various names, *mussoola*, *mossel*, *macule*, *mausolo*, it is mentioned in contemporary records covering the whole period of European dominion in the East. Dr Fryer, who was in India at the same time as Bowrey, says 'I went ashore in a *mussoola*, a boat wherein ten men paddle, the two aftermost

of whom are the steersmen, using their paddles instead of rudder', and he notes its most striking feature 'the bended planks are sewed together with rope-yarn of the cocoe and caulked with *dammar* (a tree-gum or resin) so artificially that it yields to every ambitious surf'.⁽⁵⁾ A century earlier Gasparo Balbi wrote a good description of the way in which these boats were handled: '...merchandise and passengers are transported from shipboard to the town by certain boats which are sown with fine cords; and when they approach the beach, where the sea breaks with great violence, they wait till the perilous wave has passed and then, in the interval between one wave and the next, those boatmen pull with great force and so run ashore; and being there overtaken by the waves they are carried still further up the beach. And the boats do not break, because they give to the wave; and because the beach is covered with sand, and the boats stand upright on their bottoms.'^(19e) For a safe landfall skill was needed. There are instances of European passengers drowning within a few yards of the shore through the crew's mishandling of a *masula*.

Bowrey's drawing shows the two steersmen and the long oars used. It also shows, though not so well, the narrow ends tapering to a point, the high freeboard for passing through heavy breakers, and the rounded forefoot and heel. In actual fact the lighter is beamy, stem and stern are considerably raked, and there is a short keel. The paddle-sweeps, 12 ft. long, are suspended in coir grommets on the stern post. The rest of the crew, normally six to ten in number, perch precariously on thwarts well forward. No iron is used in the hull. The planks are sewn together with coir twine—not criss-cross as in the drawing but by 'stapling' on the outside—to give the elasticity without which they would break up (see Hornell, ^(20e)).

The origin of the word *masula* is obscure. To point out a connexion with *Masulipatam* is obvious and of little value. Hornell (*ibid.*) says it is a European name for a boat called by Coromandel fishermen *padagu* or *salangu*. Ribless, sewn boats are of great antiquity. The author of the *Periplus Maris Erythraei*, a Greek merchant who lived c. A.D. 80, describes a great ship-building centre on the Persian Gulf which exported vessels called *madarata* to Arabia. *Madarata* has been derived from Arabic *muddarra*'at meaning 'fastened with palm-fibre'. Marco Polo saw this type of ship construction in the Persian Gulf, and Vasco da Gama on the east coast of Africa.⁽²⁴⁾ Iron nails and pegs from Europe brought about great changes in the methods of manufacturing local boats, besides introducing new designs. But the old boats often persisted side by side with the new, sometimes profoundly modified, sometimes hardly at all.

The *masula* is characteristic of the east coast of India. But its basic pattern is found elsewhere. Gibson-Hill has published photographs of

Singapore lighters, *c.* 1840–55, which were managed mainly by immigrants from southern India. They were carvel-built on European lines; but still beamy and deep, with rounded ends down to a short keel.⁽⁷⁾

(2) *Catamaran* (Fig. 2)



Fig. 2

‘When any great Ordinance, Anchors, butts of water or the like ponderous ladinge is carried off and on, they Seize 4, 5 or 6 large pieces of buoyant timber togeather, and this they call a Cattamaran, Upon which they can lade 3 or 5 tunns weight. When they goe on fishing, they are ready with very Small Ones of the like kind, that will carry but 4, 3, 2 or one man onely, and upon these Sad things, they will boldly adventure out of sight of the shore, but indeed they Swimme (in generall) as naturally as Spanyall dogs. I have often seen them one leage or more off Shore, when the Westerly winds have blowne very hard, which is right off, soe that they could by noe means paddle any nearer in, and they have made Sleight of it, onely let theire line with a Stone fast thereto, and let the Cattaraman ride by it, (for such are their Anchors) and they swimme on Shore against wind and Sea.’^(13b)

The sandy, surf-beaten east coast of India has few natural harbours. From Tanjore to Orissa, and round the shores of Ceylon too, the *catamaran* raft is used for fishing. Basically it is no more than a simple raft, a number of shaped logs lashed together fore and aft, propelled by a triangular sail and paddles. But since its first days its design has undergone refinement representing ‘the furthest possible evolution of the raft idea that shares with the dug-out the honour of being primitive man’s earliest conception of a means to gratify ambition for a life afloat’. Hornell has described the different types in detail.^(20b) In a typical *catamaran* the centre log (or two logs) projects aft about 4 ft. forming a seat for the steersman who squats on the soles of his feet. At the bows the planks end at the same level. The prow is finished off in an upward curve by two narrow wedge-shaped stem pieces. On the port side a bamboo rail, with two coir loops to take paddles, is mounted on a plank stretcher which is shaped to the contour of the floor of the raft. A normal crew is three men including the steersman who paddles. The dimensions vary. An average *catamaran* may be 25–30 ft. by 3–3½ ft. For drift-net fishing a slightly larger form is used, with five logs stepped back at the stern towards the centre.

A shorter, cruder form of raft, of five logs but without the beaked prow, the sail mountings or the paddle rail, is used for line-fishing. It is called *thundil-maram* and is, of the types given by Hornell, the one which Bowrey seems most likely to have had in mind when he drew his picture. But the drawing shows six logs, with the long middle one eccentrically placed. Perhaps Bowrey's memory played him false. But no great effort should have been needed. A break in his journal-writing for a short walk along the shore would have shown him all the *catamarans* he required.

In Ceylon *catamarans* are used exclusively by Tamil fishermen.⁽²³⁾ The name is from Tamil *kattu*, 'binding' and *maram*, 'logs'. It does not occur in European accounts before the end of the sixteenth century. In various spellings, *cutmurram*, *catimaron*, *gatameroni*, etc., it is mentioned by Balbi, Fryer and others.^(19b)

The next five boats illustrated in the figures are all river craft seen by Bowrey in Patna, a town on the west bank of the Ganges.

(3) *Olocko* (Fig. 3)



Fig. 3

'(This is called an Olocko.) They row Some with 4, Some with 6 owers, and ply for a faire as wherries doe in the Thames.'^(13d)

Those who have searched the records for references to this type of boat have found their task complicated by the large number of variant names and spellings given to it. *Woolock*, *oolank*, *hooluck*, *ulag* and several other forms exist in contemporary works on India from the end of the seventeenth century onwards. The word has been derived from Hindustani *ulakh* (from Persian?), 'a kind of small boat'.^(19g) This vague definition applies reasonably well to Bowrey's *olocko* which, to judge from his drawing, is about 30 ft. long with 4-5 ft. freeboard. Features of definitive value in the picture are the blunt ends raised high out of the water, a gentle sheer carrying the stern above the level of the bows, and the cabin superstructure, large in relation to the size of the boat, at the stern end.

The early chronicles of India mention the *ulakh* as a vessel of no great size for carrying passengers and goods, the produce of the Ganges basin, down to the Hugli for transhipment. By about 1750 the term was being applied to a much larger vessel with a square sail and as many as twenty oarsmen. This may have been a development of the *ulakh* or a different type of boat. Both trends must have occurred, as expanding markets created a greater volume of traffic on the Ganges. The point is obscure because in Indian records of the two centuries following Bowrey no useful description exists of the all-purposes house-boat which was such a familiar sight to European merchants in Calcutta.

There are brief accounts of the nineteenth-century *oolak* by Grierson (1884⁽¹⁰⁾) and Grant (1860^(9c)). Both writers give drawings showing a bulky vessel with prominent stern, ends sloping gently to water-level, and a house-like superstructure with doorways, window spaces and gabled roof covering almost the whole boat, leaving only a small open deck space in the bows. There is a large rudder blade of triangular frame on a vertical shaft, a single mast piercing the roof and mounting a lateen sail, and a wooden railing running along the eaves on both sides. Some of the crew can be seen standing on the roof scaffolding at the helm and the sail-ropes. Colesworthy Grant was an indigo planter of Mulnath whose hobby was pictorial art. His book, subtitled 'Letters from an artist to his sisters in England', covers the daily round of Anglo-Indian suburban life. His drawings reveal an observant eye and are presumably accurate in matters of detail. After describing the Hugli buildings he goes on '... Having fairly quitted the busier haunts of man we may turn our attention to other objects of curiosity on the river, of which the fleet of native boats, spread over its broad surface, furnish the most prominent. First we have the bulky *oolak*, or baggage boat of Bengal, sometimes as gigantic in size as the *putelee* (see below) and used for much the same purposes. This last-named vessel is a clinker-built boat—that is, having the planks overlapping each other like those in a London wherry; whereas in the round smooth-sided *oolak* and most country boats they are laid edge to edge, and fastened with iron clamps, having the appearance of being stitched.' It is of some interest that both Bowrey and Grant should have noted in the *ulakh* a resemblance to the Thames wherry.

In the Benares cargo carrier Hornell has traced the evolution of steering arrangements with increasing size of vessel.^(21b) Bowrey's elongated paddle is replaced first by a fixed steering paddle worked at a slant, then by a properly balanced rudder in which the forepart is shorter than that aft of the axis; and finally, in the largest boats, by a rudder suspended just forward of the stern-post head instead of some distance along the port quarter. The

last has a large triangular blade, and to permit it to move freely part of the stern of the *ulakh* is cut away and planked with transverse boarding. Incidentally, Hornell describes the *ulakh* as being clinker-built like the *patela*, not carvel-built as reported by Grant.

(4) *Patella* (Fig. 4)

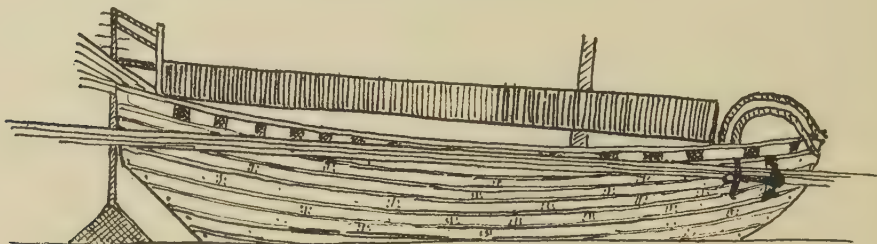


Fig. 4

‘All the Saltpetre is Sent hence to Hugly in Great flatt bottomed Vessels, of an Exceedinge Strength, which are called *Patellas*; each of them will bringe downe 4000, 5000, 6000 Bengala maunds. They are built very Stronge, by reason of the most impetuous Eddies they meet with in some places, that force them many times Upon one Shoale or Other, soe that, were they not Stronge and very flatt, they wold be in greater peril on wringing to pieces or turning bottom up. Yet some years both the English and the Dutch doeS suffer Considerable losses by them.’ (13c)

In view of what Bowrey says above we must assume that he was trying to illustrate a larger vessel than his drawing suggests. The drawing is puzzling. The shaded member on the left is clearly a rudder shaft with triangular blade dipping under water. In the centre is the single mast. But what the artist supposed the other features above deck level to be I would not care to say. The drawing suggests a boat of very shallow draught. The curving bows and stern cut away to accommodate the rudder paddle invite comparison with the modern *patela* and *ulakh* discussed by Hornell (*loc. cit.*). The European-type anchor on the bows may be noted. The boat looks to be clinker-built, with lengths of planking joined laterally with iron staples.

Colesworthy Grant lists his *putelee* as being among ‘two or three (boats) of an inferior description’.^(9b) ‘The *Putelee* (or *Kutora*) or Baggage-boat of Hindostan, is a very large, flat-bottomed, clinker-built, unwieldy-looking piece of rusticity, of probably one thousand muns (or, *anglice*, maunds), which is about thirty-five tons burthen; but occasionally they may be met with double this size. They are used principally for the carriage of cotton and other up-country produce.’ Grant’s drawing shows a boat like his *oolak*, with roofed superstructure running almost the entire length. On the roof scaffolding stand the crew attending to sail and helm.

The name may be derived from Hindustani *patila*. The vessel is also known as *patunga*. (The term *batel*, formerly used to denote a particular type of Persian Gulf fishing vessel, is of Portuguese origin. It has been adopted on the Gujerat coast for two kinds of coasting vessels, the *batella* and the *batil*.^(22b)) Hornell says that the *batella*, a cargo-carrying boat of 40–100 tons' register, is found between Cambay and Bombay. It is two-masted, with a square slightly raked stern. Although the types are clearly distinct, one cannot help wondering whether *patela* and *batela* are cognate words.

The evolution of the *patela* probably paralleled that of the *ulakh*. But the former was always the larger, beamier boat. Its shallow draught enabled it to make the difficult passage of the Hugli, to the dangers of which the East India Company's factory records frequently refer.

(5) *Budgaroo* (Fig. 5)

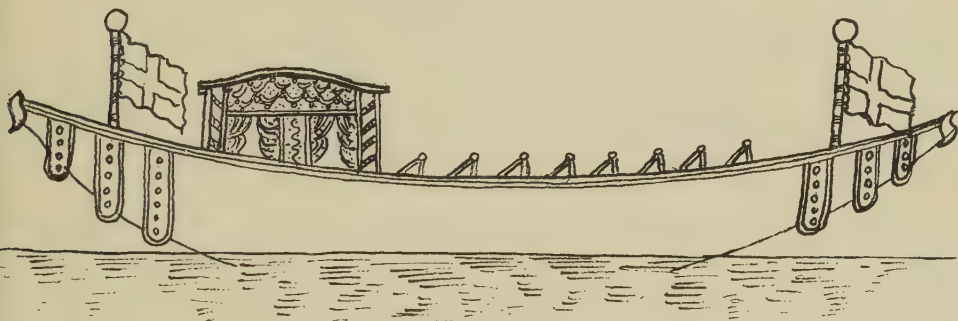


Fig. 5

'A *Budgaroo* Or Pleasure boat, wherein the English and Dutch Chiefe and Councill goe in State Upon the water, in Use alsoe by the Moors Grandees or Governours.'^(13d)

The *bajra* is the large, passenger-carrying boat of the Ganges. Bowrey's drawing may look a little surrealistic, but it correctly shows the upward sweep of the hull at the bows and stern which are pointed. The design of the ornamental cabin (ship's saloon might be a better expression) and the two flag-masts are conjectural. The boat is moving under a following wind, although Bowrey makes no provision for sail or steering

In the days when land communications in India were bad, travel by *bajra* was not solely the prerogative of the wealthy classes. Hornell says 'the humble villager and his family are content on a short journey with a stuffy little cabin on a *dinghi*, made by roofing a curved framework of bamboos with matting'.^(21a) For the East India Company's servants special boats were built, the hull beamy and full amidships with a high stern and flattish, rounded bottom. In the larger *bajra* the hull was fully decked and the cabin

built on top; in the smaller it was half decked and the cabin partially sunk below deck level. The rude bamboo cabin gives way to a wooden walled saloon, often divided into two or more rooms and a kitchen, with coach-built roof, providing all the comforts and conveniences of a bungalow ashore' (Hornell, *ibid.*).

Colesworthy Grant sketched a European-style *bajra* of this sort.^(9a) His drawing shows a two-roomed cabin with flat roof occupying half the deck. The single mast is immediately forward of the cabin door. Above the cabin roof a stout pole running from mast to stern carries a makeshift tent, the crew's quarters. Steering is by fixed triangular paddle a little to the port side of the stern-piece. 'The *bujra* is a large and commodious but generally cumbrous and sluggish boat, having more pretensions to comfort than speed; nevertheless it is frequently used for up-country journeys.'

It is this class of boat which is now used by sightseers and pleasure-parties in the principal towns of the Ganges. Its generic name is *bajra* or *badjra*, usually corrupted by Europeans to *budgerow*. Its origin is obscure. Some writers have noted a phonetic resemblance to *bazara*, a Bengal boat mentioned in European records before the end of the sixteenth century and related to the Portuguese *pajeres* (Pires's *pagueres*, see page 204) which later became *buggalow*. But the *baghla* or *bagala* is an altogether different type of vessel, a very large ocean-going cargo carrier of up to 400 tons register. It has a very high poop and transom stern ornamented with carving. It is native to the Red Sea and the Persian Gulf, whence its run is to the ports of India and Ceylon. No doubt in the early days the *baghla* fleet from Arabia would lay up in some eastern port during the south-west monsoon to refit.^(22a) But a prototype *baghla* can scarcely have given its name to the Ganges house-boat.

(6) *Purgoo* (Fig. 6)



Fig. 6

'These use for the most part between Hugly and Pyplo and Ballasore. With these boats they carry goods into the Roads on board English and Dutch &c. Ships. They will live a long time in the Sea, being brought to anchor by the Sterne, as their Usual way is.'^(13d)

Anderson⁽¹⁾ and Mookerji^(26b) both quote this passage in Bowrey's journal, without however offering any comment which would help to define the type of boat he saw. Sir Henry Yule's note is equally unrevealing.^(19b) None of the other authors, already quoted, mention the boat, evidently a stable, beamy vessel for loading and unloading ships in the Hugli estuary. Various spelt *porgoe*, *porka*, *purga*, etc., the name occurs in the Company's Bengal records between 1650 and 1700.⁽²⁸⁾ After this it disappears. It may well be, as Bowrey's editor says, a corruption of *barca*, a word used at one time by the Portuguese to denote any type of sailing ship for which no other term seemed appropriate.

(7) *Boora* (Fig. 7)

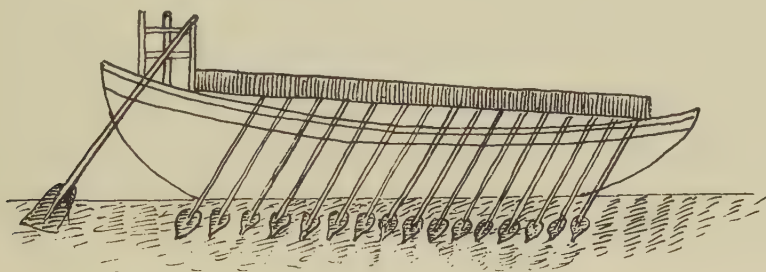


Fig. 7

'A *Boora* being a Very floaty light boat, rowinge with 20 or 30 Owers. These carry salt peeter and Other Goods (from Hugly) downewards, and some trade to Dacca with Salt; they alsoe Serve for tow boats for the Ships bound up or downe the River.'^(13d)

The accuracy of Bowrey's observations and sketch can be assessed by reference to a modern account of the *bhar* by Hornell, who says that it is the principal jute-carrier on the Hugli.^(21c) Of great beam, with low bows and slightly raised stern, the boat is designed for carrying light and bulky cargo. The hull is an open well except for a small cabin mounted on a decked-in space aft. Behind the cabin is a raised platform for the helmsman. In a fully loaded boat the cargo rises high above the gunwales. The mast is stepped amidships and carries a huge square sail. The bluff, rounded ends are well shown in Bowrey's sketch. Except in a good wind the vessel is slow and cumbersome to handle. When necessary the crew row from on top of the cargo—Fig. 7 shows sixteen pairs of oars. Sometimes the boat has to be tracked along the bank, each member of the crew pulling a separate tow-rope.

Bowrey's editor has collected from the Factory Records of the late seventeenth century references to these big, unwieldy barges called *bourie*, *bora*, etc.—'large Indian boats, very badly built'. The boats are mentioned

in Sir William Hedge's diary written at about the same time as Bowrey's journal—'. . . about noone overtook the eight *boraes*'.⁽¹²⁾ By the beginning of the next century this name for a Bengal boat seems to have dropped out.

One more boat is the subject of a sketch by Bowrey, called *Men of Warre Prow*. For several reasons I omit discussion of it here. Of all boat terms used in the East, from the Persian Gulf to the Moluccas, *prow* is the most universal. It can include almost any open boat from a dug-out to a sailing barge. The *perahu* (Malay), *paru* (West Indian), *prow* (Anglo-Indian), *pangaia* (Portuguese) in the chronicles of Pires's day to our own. Bowrey's drawing might represent any armed, native-built boat for fishing or piracy, which for Malay seamen were complementary occupations. Although Bowrey mentions the *prow* several times, nowhere does he give any descriptive details. The interest which attaches to Bowrey's boat drawings lies not in any possible claim they may be supposed to have to photographic objectivity. The perspective is often faulty, making the boat look much smaller than he intended. It is the structural details, the rudder paddle, the outline of the hull, the positions of the crew and the superstructure, which repay a few moments' study in the light of what other writers have said about them.

REFERENCES

- (1) Anderson, Philip. *The English in Western India &c.* (1856), p. 266.
- (2) Berg, C. C. The Islamization of Java, *Studia Islamica*, Vol. iv (1955), pp. 111-42 *passim*.
- (3) Brown, C. C. The Sejarah Melayu (Malay Annals). *JMBRAS*, Vol. xxv (1952), pt. II: (a) pp. 9, (b) pp. 172-3.
- (4) Cole, Fay-Cooper. *The Peoples of Malaysia* (New York, 1945), pp. 8-9.
- (5) Fryer, Dr J. A New Account of East India & Persia, 1698. In Earl's *Records of British India* (J. T. Wheeler) (1861), p. 54.
- (6) Gibson-Hill, C. A. Cargo Boats of the East Coast of Malaya. *JMBRAS*, Vol. xxii (1949), pt. III, pp. 115-17.
- (7) Gibson-Hill, C. A. Tongkang and Lighter Matters. *JMBRAS*, Vol. xxv (1952), pt. I, pp. 96-7.
- (8) Gibson-Hill, C. A. Malayan Fishing Boats. *JMBRAS*, Vol. xxvii (1954), pt. II, pp. 149-50.
- (9) Grant C. *Rural Life in Bengal* (1860): (a) p. 5, (b) pp. 6, 7, (c) p. 25.
- (10) Grierson, G. A. *Bihar Peasant Life* (1885), p. 42.
- (11) Hakluyt Society. *The Travels of Ludovico di Varthema*, no. 32 (1863), p. 154.
- (12) Hakluyt Society. *The Diary of William Hedges Esq.* no. 75 (1886), p. 237.
- (13) Hakluyt Society. *Countries Round the Bay of Bengal*, no. 12 (1903): (a) Introduction, (b) pp. 42-3, (c) p. 225, (d) pp. 227-8.
- (14) Hakluyt Society. *Cathay and the Way Thither*, no. 41, (1916), pp. 25.
- (15) Hakluyt Society. *The Book of Duarte Barbosa*, Vol. I, no. 44 (1918), pp. xxxiv-xlix.
- (16) Hakluyt Society. *The Book of Duarte Barbosa*, Vol. II, no. 49 (1921): (a) p. 96, (b) p. 108, (c) pp. 173-4.
- (17) Hakluyt Society. *The Voyage of Floris*, no. 74 (1934): (a) p. 9, (b) p. 14.

- (18) Hakluyt Society. *Suma Oriental of Tome Pires*, Vol. I, no. 89 (1944): (a) pp. xii–xlviii, (b) p. 73, (c) p. 76, (d) p. 81, (e) p. 194.
- (19) Hobson-Jobson. *A Glossary of Anglo-Indian Colloquial Words &c.*, 2nd ed. (1903), s.v.: (a) Buggalow, (b) Catamaran, (c) Catur, (d) Junk, (e) Mussoola, (f) Porgo, (g) Woolock.
- (20) Hornell, J. Indian Boat Designs. *MASB*, Vol. VII (1923): (a) pp. 142–6, (b) pp. 169–71, (c) pp. 174, 249, (d) p. 179.
- (21) Hornell J. The Boats of the Ganges. *MASB*, Vol. VIII (1929): (a) pp. 185–7, (b) pp. 191–2, (c) pp. 193–4.
- (22) Hornell, J. A tentative classification of Arab Sea-Craft. *Mariner's Mirror*, Vol. XXVIII (1942): (a) pp. 15–16, 39–40, (b) p. 33.
- (23) Hornell, J. The fishing and coastal craft of Ceylon. *Mariner's Mirror*, Vol. XXIX (1943), p. 53.
- (24) Hornell, J. Sea trade in early times. *Antiquity* (Sept. 1951), pp. 249–40.
- (25) Ibn Batuta. *Voyage d'Ibn Batoutah*, Vol. IV (Paris 1858), p. 91.
- (26) Mookerji R. *A History of Indian Shipping and Maritime Activities from the Earliest Times* (1912): (a) pp. 231–4, (b) p. 235.
- (27) Ponder, H. W. In *Javanese Waters* (1941), p. 128.
- (28) Temple, R. C. Some old Anglo-Indian terms for boats. *The Indian Antiquary*, Vol. XXX (1901), p. 162.
- (29) Winstedt, Sir R. O. The Malay Annals *JMBRAS*, Vol. XVI (1938), pt. III, p. 196.

Note. *JMBRAS* = *Journal of the Malayan Branch Royal Asiatic Society*; *MASB* = *Memoirs of the Asiatic Society of Bengal*.

General note on the illustrations

All the illustrations used here are taken from the plates used by the editors of Thomas Bowrey's journal, and which were published in *Countries Round the Bay of Bengal*. For purposes of this article Mr R. Morton Nance, Vice-President of the Society for Nautical Research, kindly made enlargements of them by hand. These are reproduced by permission of the Council of the Hakluyt Society.

HUMBER KEELS

PART II

By John Frank

In the October number of *The Mariner's Mirror* for 1955 there appeared a very interesting article on the Humber Keel written by Mr John Frank, who at one time commanded and owned one of these vessels. Mr Frank asked me to edit his manuscript before it was printed which I very gladly did and he has now asked me to do the same for a further article on these interesting but now non-existent craft. As before, the drawings have been made by Mr H. J. B. Hill from sketches supplied by Mr Frank; and readers may be assured that these drawings are correct as they have all been passed by the author, who was so well acquainted in real life with the various articles depicted.

H. O. HILL

AFTER my last article on the Humber keels and sloops I received several letters asking me to write again about how keels were painted, how the keelmen lived and various other things about them. I thought I had told all I knew in my last effort; then it happened I went over to Barton one Thursday morning. I was walking down Holy Dyke when someone shouted, it was one of our old captain's daughters Edna Burkill, her next door neighbour was sweeping snow from the path, he was Tom Matthews an old captain. A little further on I spoke to two more captains, they were blowing masts out (as my father used to say)¹ with their hands in their pockets up to the elbows, I left them and I met a man who looked ill and I had not seen him for a long time, he was Chick Chant, the last man to heave up a sloop's sails, the *Ivy of Barton*. I talked to him a little while, and then went and saw the cobbler, a friend of mine, who comes from an old sailing family, with him was one Alfred Holman, who was skipper of a ship built at Wintringham called the *Thistle*. I next went to the bank and then I sauntered into the market place to catch my bus back home. When I got comfortable on the bus I began to think there was something in it about writing to let people know how these people got a living on a barge. In about ten years from now (1956) they will not even be a memory. As I go to church on Sunday I pass a stone, just a simple stone, it says on it

MORDECAI WILSON,
Fisherman of
Barton
1765 age 85.

1 A local saying when sailors were telling one another of their exploits on board ship.



A Keel, bow view. On the Trent near Keadby, *c.* 1903

A sloop-rigged Keel is astern

(Copyright E. W. Carter, Gainsborough)



A Keel, stern view. On the Trent near Keadby, *c.* 1903

(Copyright E. W. Carter, Gainsborough)

(Facing p. 218)

I have often wondered how he fished and what he fished for. He may have been an old eel catcher who had a blobbing boat as they were called, or he may have had a smack with nets to lower when the tide was ebbing, or a salmon fisher, who stood in the water up to the waist with a peculiar kind of net for the salmon when swimming inshore; the man had a long stick which was bent with a kind of bag which held the net; he may have been a Seine netter or even an angler. Well I do not suppose anybody knows and they won't know about the keelmen either if somebody does not do something soon. It would be difficult for me to write about every trip which was made by us in the keels, but I have an old diary for 1921. I see in the month of April our trips were as follows:

Date	Loaded at	Freight	Quantity (bricks)	Discharge	Thirds			Freight		
					£	s.	d.	£	s.	d.
30 Mar.	S. Ferriby	9s. M ¹	32,000	Hall's Wharf, Hull	4	16	0	14	8	0
3 Apr.	Sluice	9s. M	32,000	Hall's Wharf, Hull	4	16	0	14	8	0
8 Apr.	Sluice	9s. M	27,000	Markham's Wharf, Hull	4	1	0	12	3	0
12 Apr.	Sluice	12s. M	30,500	Grimsby	6	2	0	18	6	0
18 Apr.	Sluice	9s. M	30,500	Williamson's Wharf, Hull	4	11	6	13	14	6
22 Apr.	Sluice	9s. M	30,000	Markham's Wharf, Hull	4	10	0	13	10	0
26 Apr.	Sluice	9s. M	32,000	Reckett's Wharf, Stoneferry	4	16	0	14	8	0
30 Apr.	Sluice	9s. M	28,000	Hull	4	4	0	12	12	0
			242,000							

In May we did four cargoes to Hull, two to Grimsby; June we had one week painting. Four cargoes of bricks to Hull. July five cargoes to Hull, one to Brigg and a load of clay to Burton Stather. August four loads of bricks to Hull and went to Keadby for 80 tons of coal, unloaded 40 tons at Burton then went down to New Holland for 40 tons of anthracite, broke a leeboard turning round Brough Scorpis. We discharged the anthracite then the coal and loaded for Grimsby:

3 Sept.	Loaded for Hull	21 Sept.	Loaded for Grimsby
11 Sept.	Loaded for Hull	25 Sept.	Loaded for Hull
13 Sept.	Loaded for Stoneferry	28 Sept.	Loaded for Hull
16 Sept.	Loaded for Recketts	5 Oct.	Loads for Hull

1 November loaded bricks, had a fight with my mate, shipped another mate Fred Huteson. 7 November 30,000 to Hull. 10 November brought wood to Sluice then loaded 45 tons of clay for Burton Stather, then loaded 75 tons of sand and some tiles back. 20 November Sluice to Grimsby. 1 December Sluice to Hull. 12 December took brick to Burton Stather, loaded sand back, got a tow up to Burton with steam keel *Swift*, Captain

1 9s. M = 9s. per 1000.

G. Ward. 20 December left Sluice for Selby, we had never been to Selby before. Just coming dark when we passed Goole, came in thick when we were in Sand Hall.¹

We let Bob Cooper in the *Hydro* come past us here, he showed us where to anchor. Just below Hook bridge, during the ebb it got thicker, we could not see the red light on the Hook bridge 200 yards away. During the night Cooper shouted and told us to weigh anchor and follow him through the bridge at flood, this we did; we never saw the bridge but we did see the lights and we followed Cooper's riding light till we got to Howden Dyke then we went on in the dark and fog by ourselves, we let the anchor drag and went on very slowly over Howden Dyke middle on to Clot Hall past Booth Ferry where there is a fine bridge now. We put the rod down and there was plenty of water, so we brought up here and waited for day-light. When it came light we found we were riding beside a row of beautiful trees; during the morning it cleared and before us were three channels, one was the river Aire then the Asselby Island, we did not know which way to take, then after dinner we saw the steam keel *Ouse* come through the middle channel of the three so we knew that was the way we should have to take; this set our minds at rest. We had to wait until nearly dark for the tide to turn, then we shortened the anchor chain and sheared off into the middle of the stream so we did not get sucked into the Aire. The way round Asselby was narrow and frightening, it was black dark amongst the trees, finally we opened out into the wider part of the Ouse with only willow trees on the banks; it was much better going now not near so dark, we could see both banks and we hove the anchor short and let the ship go, we had to drive,² as it was impossible to sail up a river we did not know well enough; however, we plodded on and rounded a bend and came in sight of a bridge, it was Barmby in the marsh; we pulled our anchor light well up the fore-stay and blew on the fog horn and presently the green light appeared on the bridge, we hove the anchor short³ and let the ship drive through, we were off exploring again in the dark; after a while we passed a river mouth, this we took to be the mouth of the Derwent, we had not gone far past when we thought we heard a tug blowing for Barmby bridge and it was. He soon came up with us, it was a tug called the *Sir Joseph Ryhmer* of York; I gave him a pip on the fog horn and he slowed up, and we got the anchor up and a rope on and we were soon up at Selby. As we were for a wharf in between the two bridges, we were advised to anchor near Selby lock for the night; this we did and got a good night's

¹ The name of a reach.

² Driving is working with the tide without sails up.

³ Not quite off the bottom.

sleep, we were a bit tired as we had not had much sleep at Hook bridge the night before. The next morning at slack water, high tide, we set off again through the bridge and got onto our moorings; this was a nightmare, we had to moor with our head to the ebb and we had to put our big tow-rope out astern 35 fathoms and a big harbour rope to hold us against the Aegir, if we had broken adrift Selby toll bridge was just in front of us. However, we got a few bricks out in the afternoon. After tea we went ashore to post some letters. We went back on board about 7 to watch the ropes when the Aegir passed and found that we were too late, it had gone by and the ship was riding stern first to a strong tide. The next day being Saturday we got finished unloading and some food on board and we took with us a cousin of mine, along from Selby, and set off about 2 in the afternoon, it was blowing a gale N.W. which was a fair wind all the way home except one short reach which is called No Man's Friend. We blew down to it under fore-sail, then had to drop it as owing to the curve in this reach the wind became contrary, and it took us three hours to get through; as fast as we got one bit of the way she blew back against the ebb. We got through at nearly dark and set the foresail again and went tearing down the river which we had not seen on the way up. When we got to Hemingbrough we were stopped by an Aegir the like of which I had not seen before or since, it was enormous. The gale of wind had brought a blown tide, bank burst and houses on river sides were flooded; when the tide eased we set off again, through the Barmy bridge and about one mile below, then I thought I would bring up and wait for daylight as I did not like the tremendous ebb and the wind behind us, so we slept. We were awakened next morning by another Aegir but not so fierce as the last; it was a beautiful morning, the wind had dropped to just a breeze, my mate and the youth from Selby espied a potato pile at the other side of the field so they decided we had better have some potatoes; they tramped all the way across to the pile, then found it was mangel-wurzels. The tide began to ease and we got under way with a nice wholesail breeze, in daylight we passed Assleby Island, Air mouth and Boothferry. We soon came to Howden Dyke, past Skelton and Hook there was too much ebb to run Hook Bridge so we rounded up and dropped through the bridge, when we got through we did not get under sail till we were past Goole and in Swinefleet Reach. We got our sails up and soon came to the Trent end; as we had to be at Burton Stather for Monday to load sand we brought up near to Bosam Cross stone heap, it was Sunday afternoon. Sunday night we went up to Burton Stather and the gap through the bank had burst on Saturday night and washed all our sand away. On the Monday morning we started loading sand down to the waterside with horse carts and on the 24 December we went home with our sand and arrived in

time for Xmas. From 1 July to 31 December freights came to £375. *os.* 8*d.* Thirds, the owner's share was £125. *os.* 2*d.*

- | | |
|-----------|---|
| Jan. 1922 | Two loads from Burton Stather to Hull
One load from Ferriby Sluice to Hull
One load from Burton Stather to Grimsby |
| Feb. 1922 | One load of sand from Burton Stather to Barton
Two loads of bricks from Sluice to Hull
One load of bricks from Sluice to Beverley |

Purchase man¹ to Burton Hall (purchaseman helped with the pushing up the river Hull). 4 March, South Ferriby to Grimsby. 10 March, Burton Stather sand to Barton Haven 105 tons. Had a Blood-poisoned finger, set a man on to fill baskets while I went to doctor. 18 March, Burton Stather to Hull. 20 March, Sluice to Hull. 25 March, Burton Stather to Barrow Haven. 50 tons of sand. That is an account of one year's working.

When we look back it makes one wonder how we managed to get a ship painted. On the first fine day in spring when all the paint and scraped work was getting shabby we used to get out our linseed oil pot and rub oil on all the scraped work, rails, winch posts, covering boards, bitt heads, if the coaming planks were dry we used to paint them and tar the waterways. The first fine day when we had our mast down and waiting to move up Hull Harbour we used to oil our mast and serve and parcel and repair our rigging where it had got chafed. The next time we had it lowered we used to get the rigging tarred. The first time we went to Grimsby we used to take off our sails and go to see a man at the Coal, Salt & Tanning Co., a Mr Carter; he used to fetch our sails and tan them and bring them back with water and grease running out of them; we used to get them bent on and we were like Red Indians; it used to take us about three weeks to get them dry. On the first day when the covers (hatch) got warmed in the sun we used to fettle² them, fish oil, Stockholm tar and linseed oil, then we used to let this get dry, they had collected quite a lot of grease off the sails before we fettled them. Then when we had a few hours to spare, like riding at anchor, we used to scrape old paint off and put on a coat of priming, then we used to do a bit of scraping. The linseed oil had by this time softened the wood and made it scrape easier. We used to make scraper from old files bent at the ends; we used to break off the file tang and get the file end red hot in a fire then beat it out and bend it over, then do the other end the same, these

¹ A purchase man was a man who helped keelmen when they wanted an extra hand when quanting, etc. A keelman could manage in the canal with his wife, but if he went down to Grimsby or Hull in bad weather he took a purchase man.

² Fettle is to dress them with cover dressing.

were the best scrapers. We used to put them in the fire until they got hot and then take them out and watch them until the whole blade turned straw colour as they were cooling, then plunge them in water. We always used to keep a few more scrapers than we needed then when we got moored **between two ships** with our mast down we used to start scraping. When our neighbours came to talk we used to invite them to sharpen scrapers or pretend we could not sharpen them very well, they usually came and helped us and we would get the mast done before flood in about three hours, we then gave it a coat of oil and sewed on to the vane 6 ft. of new best turkey red bunting. We used to get everything scraped and one coat of oil and all paintwork primed. Then came the time when we could lay up to paint properly, usually a week.

I used to paint my ship *Nero* with emerald green for the timber heads and horse timbers, coamings grained, top strake white enamel, the hull pea green. First thing was to give the timber heads a coat of pale green priming while the mate gave the coamings a coat of buff or straw then when I had finished I mixed my emerald green powder with turps and a lump of white lead about as big as a walnut. I then painted the timber heads etc. with this and they became a vivid green. I left this to get well dry, then the next day I mixed more up only this time with a little oil to make it set better, with two coats of green and one of priming now and one a week or two earlier, it was now well covered.

The mate had got two coats of priming on the coamings and head-edges, he then gives his coamings a coat of light oak and runs the comb over it while the skipper grains the head-edges, then marks them off with panels. The batten irons are usually taken into the hold and rested with one end on the kelson and the other end on a plank, and the light boards and irons are taken below out of the way then all the coaming edges are marked off with dark paint, then we start and varnish over everything, paintwork and scraped work except the part of the mast which the hoops slide up, this is only oiled with pure raw linseed oil.

Most keels have their outside tarred, all except the top strake, a few had them painted either red or grey. I used to mix about one gallon of grey nearly white and then put into that a bit of green paint mixed with turps; it made a very nice colour and looked well. The leeboards we used to heave up on deck with the peak halyards and tar the inside, then we painted the outside red oxide and marked the irons with black; the leeboard head and tail chains were tarred or painted red. The spare anchor on deck was black varnished, also the bilges outside and under the run; we used to lay on the beach to do this. The hatches were tarred and the hand-boards were painted red so one did not daub the hands with tar. The winches for heaving

up the sail were usually painted green or black. The cob boat was painted the same colour as the ship, either green or blue. The oars and stowers were painted or oiled, it made them smoother to handle. The kedge anchor and dog-leg (Fig. 1) were usually painted red and the canal tiller.

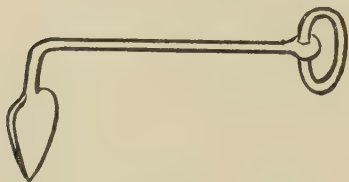


Fig. 1



Fig. 3



Fig. 2



Fig. 4

The kedge anchor was for warping a ship out of a creek and the dog-leg was to moor a ship to a bank when there was no post. Then there was the lettering of the horse and the bows (Figs. 2-4). Most people got their lettering done by an expert, I used to do my own, it used not to look quite so well, but I had the satisfaction of looking at my own handywork. Most of the larger keel owners used to have all their ships painted the same colour.

Most keels on the Sheffield and South Yorkshire Canal are painted blue; we used to buy it in powder form; we mixed $\frac{1}{2}$ lb. of ultramarine powder to a liquid with turps, then we mixed up white lead, turps and linseed oil until we had good white paint, then we poured in some of the blue and kept stirring and adding more blue until you got a nice light blue paint.

You paint two coats of blue on the timber heads and coamings, then you mark it off with some of the dark blue. Some keelmen were really good at this by years of practice with a goose hair brush. I was never good at this.

Sometimes a keel would have a bit of gilt for the truck and the featherings, and perhaps a star on the stay clog (this was a clog fitted into the top of the stem to prevent the stay blocks from dropping down on to the anchor gear and windlass levers when the mast is lowered). The gilt we used to buy in what was called a book, it was very thin and it lay as a leaf of tissue paper in a leaf of the book.

We used to paint the part to be gilded with gold size and wait until it became nearly set then we took a leaf of gilt and carefully put the gold side

on the wood and rub very gently on the paper; we afterwards took the paper off and it left the gold leaf sticking to the wood, it looked nice and smart but what a messy job.

Keels and Sloops on the Humber¹

Tom Matthews	S	<i>Burgate</i> , Barton
John Mathews	S	<i>Vardon</i> , Barton
John Foster	S	<i>Miss Patricia</i> , Barton
Wm. Foster	S	<i>Paradise</i> , Barton
Arthur Foster	S	<i>Zenith</i> , Barton
Charley East	S	<i>Saxby</i> Barton
Harry Horsfall	S	<i>Rhoda</i> , Barton
Wag. Horsfall	S	<i>Gravel</i> } 2nd changed Hull,
Charles H. Jackson	S	<i>Iris</i> } 1st Name Ferriby Sluice
J. Waddingham (Father)	S	<i>Nero</i> , drowned 1907
H. Waddingham (Son)	S	<i>Nero</i> , drowned 1937
J. Frank	S	<i>Nero</i> , 1914, 1935
W. Burkill }	S	{ <i>Providence</i> , 1907-1920, Ferriby
W. Burkill }	S	
R. Cook	S	<i>John and Annie</i> , Grimsby
A. Leggott	S	<i>Sarah</i> Owston Ferry
T. Leggott	S	<i>Rising Hope</i> , Owston Ferry
F. Harness	S	<i>Salvager</i> , Owston Ferry
Harry Hodgson	S	<i>Alvas</i> , Barton
C. Hamilton	S	<i>Faxfleet</i> , Market Weighton
W. Rhodes	S	<i>Swinefleet</i> , Market Weighton
A. Mouncer	S	<i>Marfleet</i> , Market Weighton
Sammy St Paul	S	<i>Skelfleet</i> , Market Weighton
Wm. Creasey	S	<i>Ousfleet</i> , Market Weighton
J. Simson	S	<i>Brickfleet</i>
A. Barley	S	<i>Adlingfleet</i>
T. Barley	S	<i>Hopewell</i> , Wintringham
T. Peck	S	<i>Walcot</i> , Whitton
B. Whiting	S	<i>Ivanhoe</i> , Beverley
J. Chant	S	<i>Nancy</i> , Neap House
F. Dawson	S	<i>Annie Elizabeth</i> , Barton
Len Barracrough }		<i>Betty</i> , Barrow on Humber
Bill Newton }	S	<i>Madge Jarvil</i> , Hull
J. Barracrough	S	<i>Amy Howson</i> , Hull
Charley Waterhand	S	<i>Gleaner</i> , Ouston Ferry
W. Winship	S	<i>Romeo</i> , Hull
H. Harness	S	<i>Rhoda</i> , Barton
T. Eastwood	S	<i>Brilliant Star</i> , Barton
Tommy Newton	S	<i>Annie B</i> , Barton
Walter Charles Peck	K	<i>Faith</i> , Thorn
A. Chester	K	<i>British Oak</i> , Thorn
A. Chester	K	<i>Valuta</i> , Thorn
H. England	K	<i>Omega</i> , Brigg
J. Hardy	K	<i>Alpha</i> , Brigg

¹ Approximately 1914-35.

Keels Sloops on the Humber (cont.)

F. Codd	K	<i>Thrift</i> , Brigg
W. Seddons	S	<i>Britannia</i> , Barton
J. Seddon	S	<i>Miss Madeline</i> , Barton
J. Barraclough	S	<i>Alfred</i> , Grimsby
F. Chapman	S	<i>Swift</i> , Grimsby
H. Chapman	S	<i>Muriel</i> , Barton
A. Hobman	S	<i>Thistle</i> , Barton
W. Biggins	S	<i>Adamant</i> , Barton
W. Caldicot	S	<i>Elizabeth</i> , Butterwick
J. Fines	S	<i>Merchant</i> , Stockwith
F. Proctor	S	<i>Annie Maud</i> , Barton
Wallace Walker	S	<i>Kate</i> , Barton
Tom Walker	S	<i>Jenny</i> , Barton
John Richmond	S	<i>William and Arthur</i> , Barton
Geo. Wilson	S	<i>Hope</i> , Weighton River
Dick Harness	S	<i>Dei Gratia</i> , Barton (changed to <i>Swallow</i>)
S. Richardson	S	<i>Solfa</i> , Hull
Fred Richardson	S	<i>Sovita</i> , Hull
Frank Horsfall	K	<i>Ivy</i> , Barton
H. Holt	K	<i>Mizpaph</i> , Thorn
J. Holt	S 1914	<i>James and Irene</i> , Thorn
	1925	<i>Emily</i> , Hull
J. H. Whittle	K	<i>Onesimus</i> , Hull
W. A. Akester	K	<i>Britannia</i> , Barton
	K	<i>Vanguard</i> , Hull
S. Wright	K	<i>Albatross</i> , Louth
G. Towle	S	<i>Iona</i> , Barrow
G. Day	K	<i>Swallow</i> , Louth
A. Holgate	K	<i>Admiral</i> , Beverley
Geo. Oldridge	S	<i>Venus</i> , Barton
D. Williams	S	<i>Crambeck</i> , Goole
W. Holmes	S	<i>Valiant</i> , Stainforth
W. Caldicot, Jnr.		<i>Fanny</i> , Butterwick
J. H. Barraclough	S	<i>John William</i> , Barton
J. Knott	S	<i>Autumn</i> , Barton
C. Oldridge	K	<i>Venus</i> , Barton
J. Alma	K	<i>Lavinia</i> (with square stern), Hull

S, sloop; K, keel.

These are by no means all the keels, there were dozens more. On 12 December 1895 one of our sloops the *Providence* had a terrible experience. She was on her way to Grimsby loaded with bricks when a gale sprang up. The ship had only got as far as Immingham on the ebb and was brought up where Immingham Jetty is now built. The ship was nearly new and the hatches and covers were good and the skipper got some nails and nailed all the cover battens to the coamings through the covers as the wedges would keep washing out with the ship working. During the night

the wind blew so hard that the ship was continually under water, on the morning of the 13th the wind came off the land and they were able to sail down to Grimsby. My father was mate with J. Waddingham and Harry Waddingham was cabin lad. There is a memorial somewhere in Grimsby (I think in the fisherman's chapel) to nearly 200 fishermen who were drowned that night.

There was a barque rode down at her anchor, Smacks blown ashore all over the beach from Donna Nook to Cleethorpes. Wind. E. Some keels which had to trade on a canal with a lot of fixed bridges had a very short mast, it was less trouble heaving up and was much handier to work than a long pole mast and not being so far over the stern; one was apt to break some windows, when alongside warehouses etc., with a long mast when lowered. When a keel or sloop went up Goole Canal or Sheffield and South Yorkshire Canal, the gear had to be put ashore, that is the anchor and leeboards, and the boat had to be left. Some people left the anchor in the boat and left the leeboards ashore. The Dog and Duck was the name of the place at Goole. I think it was the canal yard at Thorne.

A lot depended on what time a keel expected to be away as to what kind of food the men lived on. I was never away from home more than a week or two at most, so my mother and later my wife used to pack up enough pasties to last about one week. I used to keep my mates in food so I used to keep at home two pigs to kill and salt in the winter time, this provided us with bacon the following year. We used to keep a bit of bacon on board 3 or 4 lb., and a stone or two of potatoes; we used to live well. We could get fresh bread at any village or town or some people on the canal side would sell you a loaf. I once got at a farm on the Trent side twenty-four eggs for one shilling, I went ashore with a draw bucket and came back with it nearly full. In the days when there were no motors or buses and farmers had only carriers carts and ponies and traps to get to market, they would sell eggs or butter to anyone who came to the door to buy; on some canals the farms on the riverside used to go to market by fly-boat, a passenger-carrying boat drawn by two horses. On keels where women lived with their husbands quite a lot of food could be obtained on the riverside, one had not to sail very far before they came to a field where they could obtain mushrooms or bluestalks. Blackberries could be had for just anchoring the keel in near a big hedge or elderberries. Then there was in the early summer wild birds eggs in plenty, plover moorhen (if you take away one waterhen egg every day, she will lay for you for weeks the same as a chicken, always leave one in). Sometimes one would come across a wild duck's nest or perhaps a pheasant. Then there was the poor little bunny rabbit; with a few snares or snicles as they were called it was possible to catch wild animals

without making a lot of noise. Then before there were so many chemical works and soap flakes and sewage in our rivers they used to abound with fish of all kinds. The commonest and most eaten of all was perhaps the eel; a lot of keels had a few eel baskets on board, it was an art making an eel basket, then there was the auger, it was an instrument made something like a spade, it first of all had a socket like we put a shaft of a spade in, then riveted to this was a set of steel strips made from old iron bed-laths, then one piece fastened across to hold them in position (Fig. 5). This was fastened on to a light boat-hook shaft and the procedure with this was to walk up a drain side till you saw a hole in the mud under the water, then you pushed your auger into the mud a little way from the hole so that it went at right angles to the end in the hole, you then withdrew it and the eel was in between the prongs of the tool. One had to work against the stream or the disturbing of the mud would make it difficult to see the holes in the bottom of the drain. Then there was blobbing for eels; this method was to thread a lot of worms on a piece of worsted with a needle, like women call a slotting needle, it was a thing with an eye and a blunt end; you threaded the worms from end to end till you had got about 2 or 3 yards, you then coiled them up and tied them like you would a piece of line, to this you fastened a piece of string about 10 ft. long, threaded on the string was a weight, it was a piece of lead like a plumb-bob used by bricklayers and slipped down the line into the worms; the other end of the line was fastened to a stick about 6 or 8 ft. long; you sat in the boat if you were on a tideway, moored to the bank and let the worms just touch the bottom with no slack line, and when you had a bite you could feel the eel tugging at the worms; all you did was to lift the eel out of the water and he dropped in the boat bottom or a tub or a box, one could soon get a fry of eels this way, even a few to swap for something else to eat. Two could fish from one boat, one forrard and one aft. Some people say the eel gets his teeth fast in the wool, others say having got hold of a worm he is too greedy to let go. Then there was the night line when fishing was prohibited; it was a line with a large eel hook which was baited and thrown in, it was fastened to a peg which was stuck in amongst the reeds out of sight, this often produced a big eel of 1 or even 3 lb.; sometimes this method would produce a pike especially if baited with a live roach. Of course there was also the slow method of fishing with a rod and line.

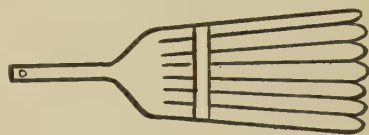


Fig. 5

On the hatches of a keel one often saw a handle about 6 ft. long with a hoop about 2 ft. across, on this was a net much like a landing net used by

anglers, this was a salmon net. On a spring tide the Aegir used to stir up the mud so much that the water for about one hour after flood was like creamy mud, now salmon coming up the river to spawn, got choked, the mud got into their gills to such an extent that they choked and nearly went mad; as the water began to clear, the thick water went to the bottom and it got thinner on the top; the fish found this water and swam about with his dorsal fin out of the water, this was where the keelman with his net came in, if the ship was well moored he would set off in the small boat,¹ about one hour before flood to meet the Aegir, he would probably get four or five miles down stream, he would let the boat drift back with the tide and keep a look out for a fish, then he would manoeuvre till his boat was near the fish, then he would drop the hoop in front of it, the fish would be nearly exhausted with madly rushing about, it could not see where it was going, sometimes they have been head first up the bank. If a keelman got a salmon it would supply him and his friends with a good meal, and in the town there was a market for a fish it they could get it ashore on the quiet, as I never heard of a keelman with a salmon licence.

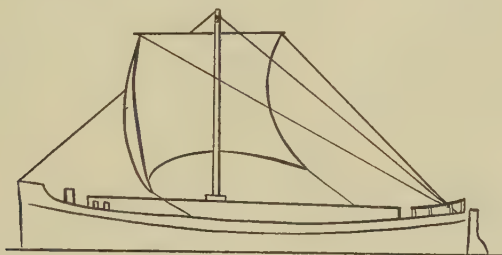


Fig. 6

Well, all this goes to show how a keelman could get a bit of food on the cheap to help him out. There is a story of five men on a sand keel who got a salmon, they took it to a certain pub and sold it for 6s., they did not know how to divide 6s. between five men, then the skipper said he would divide it, he took the money and said, 'two for you two, two for you two and two for me too'. The only cooking utensils on a keel were a kettle, a frying pan, a stew pan and a beef kettle. With these pans we could cook a great variety of food, we could fry bacon, onions, liver, beef, steak, pancakes. We could hot pies up like beef and potato pie, cook fish, tomatoes. With the boiling pan we could boil suet-dumplings or plum duff, a piece of meat or potatoes, sweeds, turnips, carrots, cabbage; in the beef kettle we used to keep stock and add to it. You only had time to use boiling pans when you

1 A keel's small boat would meet the Aegir very well if it was head to the wave.

were on a long trip, if you were loading one day and discharging the next you had not time for any more than a kettle and frying pan. It was when you were riding at anchor for a long time or waiting for a wind that you had time to cook a hot meal. Some sloops had for going up a Canal a jury rig (Fig. 6), they used to put ashore their mast and sails and then put some rigging on the derrick pole and had a small square sail for blowing about in a canal, by this means they could save a good bit on horse marines.

In the year 1930 I was skipper of two ships at once. Now this was really a tiring job. On 27 October we loaded the *Nero* with 20,000 bricks. The loading note says start unloading at Green's Wharf, Hull at 7.30 on 28th. I remember this well, we had just finished unloading when my father rang up and said 'bring the *Nero* home to load for Hull, the *Providence* is loaded at Burton Stather you can take her to Hull while we load *Nero*, by the way your wife has had a baby boy, they are both alright'. I went down harbour that night and home to see my wife and off again next morning 29th to get a ship from Burton Stather to Hull. 30 October saw me leaving home with the *Nero* with 28,000 bricks for Barraclough's Wharf, Hull. On 5 November I was again leaving with *Nero* for Houlton's Wharf, Hull, 22,000 bricks. On the night of 30 October I took the *Providence* to Keadby for 80 tons of coal for Ferriby Sluice. On 10 November I was leaving Ferriby with the *Providence* with a load of hand-made bricks 30,000 for Hull. 11 November I took the *Nero* to Grimsby with 32,000 bricks for Ferriby.

13 Nov.	<i>Providence</i> to Hull	26,000
15 Nov.	<i>Nero</i> to Hull	33,000
18 Nov.	<i>Providence</i> to Hull	28,000
19 Nov.	<i>Nero</i> to Hull	30,000, from Burton Stather
21 Nov.	<i>Providence</i> to Hull	28,000
27 Nov.	<i>Nero</i> to Hull	28,000
29 Nov.	<i>Providence</i> to Hull	32,760, to New Holland Dock

I stuck to this for a year because the skipper of the *Providence* was ill and his boys were mates with him. I had some terrible tramps over to Barton in the middle of the night five miles, getting home for perhaps only a few hours or only a few minutes, it was a tiring job. I remember being at home one Monday morning with two ships loaded for Hull, there was a lovely fair wind so we set off on the eleven-mile journey, *Nero*, against the spring tide dodging on shore to get as much slack as we could, we arrived at Hull Salthouse Lane just after high water, I jumped ashore ran to the pier and caught the New Holland ferry and arrived home at 11.30, the tide had fallen about 6 ft.; we got the *Providence* into the lock and reefed down saved water into Hull harbour with the second ship in one morning.

I carried on with this sort of thing until I nearly made myself ill, then I packed up. I was away from home all one week and I had not had my boots off from Monday morning, this was Friday afternoon, we had beaten up from Hull with one reef, the wind was N.W. and I could see Ferriby Sluice Haven about $\frac{1}{2}$ a mile away. I was dead tired, all at once I could not see the Haven, in fact I could not see anything, my mate said 'what's the matter with you', I said, 'I feel all right but I cannot see', the mate took the tiller and my sight came back and I made up my mind to finish this silly business. We got another skipper on 2 February 1931 and I went back to my own ship *Nero*.



Fig. 7

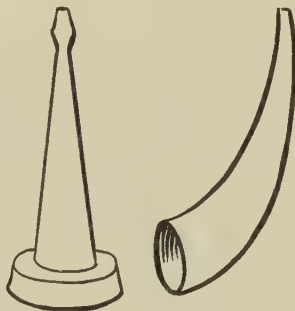


Fig. 8

Bowyanking

If a keelman wanted to get up a canal in a calm or head wind and he could not get a horse to pull him, he had to put the mate ashore with a man's line; this was a piece of light line about as thick as rattling lines, it was of cotton and affixed to this was what is known as a seal (Fig. 7) to put round the shoulders, it was made of canvas and made pulling a lot easier. Sometimes the skipper's wife used to get ashore and pull, while the old man sat on the tiller and smoked his pipe. If the sail would stand sheeted hard home one could with a line keep the ship up to the weather bank of a canal.

A ship would sail in a canal a lot nearer the wind than outside, it seemed as if the water was acting as a fend off between the ship and the bank. I have heard keelmen talk of getting the suck of the weather bank when sailing. I never really knew how this worked out, unless it had something to do with the water not being able to get in between the ship and the bank on the wind side (weather bank). I have heard it said that a Yarmouth Wherry had to go to leeward to get under way because when she started to go ahead the water got in between the bow and the bank being sharp forward. This was not so with the keel, you had to get underway from the weather bank because a keel fell away to leeward before gathering way.

With a light sloop you could drop the leeboard about 10 ft. from the bank and get the sail up, when you began to set the peak it would force the ship ahead and she would come off the lee bank.

Fog Horn (Fig. 8)

Most fog-horns were of tin or brass with a reed to blow with the mouth. I once saw one made from a cow's horn, it was a beautiful thing polished with age, the noise had to be made with the lip as a musical instrument.

Trickery

There was a time in about 1925 when we could not lay two ships abreast if loaded because the off side ship grounded first and held up the ship near the jetty, at Ferriby Sluice.

It so happened that a friend of mine loaded bricks at Ferriby Sluice when I did, he got loaded first and went down to the lockpit. We got loaded about 5 in the afternoon, it was high water about 6 o'clock. We both had orders to be at Hull for worktime the next morning, he penned out of the lock first and rushed alongside the jetty, before we got alongside him it was as thick as a hedge. His home was in Hull, we were at home, he was alongside the jetty so there was nothing for it but us going out of the haven and riding at anchor; I asked the other skipper if he was going out and he said he was stopping at the jetty unless we went to Hull and he would not budge, my mates were getting uneasy and so was I, we did not want to be riding at anchor all night when we could be at home in bed. I paced about the deck for a long time until I knew it was slack water, then I said to my mates, 'get the sail up', they thought I was crazy: this made the other fellow get his sails up, it was a head wind to Hull. We let go of our ropes and sailed out of the haven across the channel and came about; when we were coming back on the other tack we passed the other fellow reaching off the land and we sailed straight back alongside the jetty and tied up for the night, and went home. We heard the other chap let go his anchor and bring up and we heard his bell ringing several times during the night.

An old keelman though he would buy a keel for him and his wife to potter about and pick up a bit of a living. After examining the keel and its gear and making inquiries about making water the would-be salesman assured him that she never made any water. The old man then said: I don't like the look of that pump it does not seem as if it would be any good if the ship did make any water', the salesman says, 'it's a good pump and will shift water'. The old man said, 'let's look at the spear and bottom bucket', which was fetched upon deck, the leather was badly worn and when it went

into the barrel of the pump it was loose further down where it had worn the barrel with much plunging up and down. The old man said, 'I will bid you good day, I am on the lookout for a ship which has a pump rusted out not worn out.'

Some keels had, inside the cabin hatch (Fig. 9), fastened through the deck beams, two iron bars; they used to slide to form a cross, these were called thief bars; they had a hole through the middle and a bolt through them, it was a good way to lock the cabin up.

Mooring in a narrow river with a pole to keep a vessel off the bank (Figs. 10, 12 and 13).

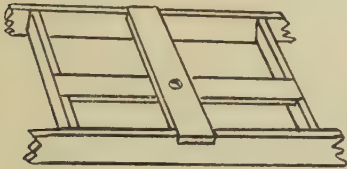


Fig. 9

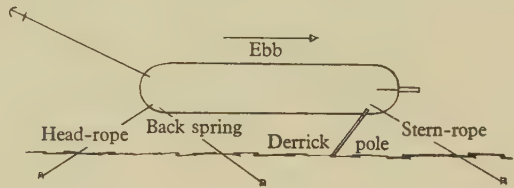


Fig. 10

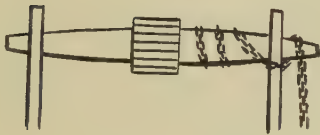


Fig. 11

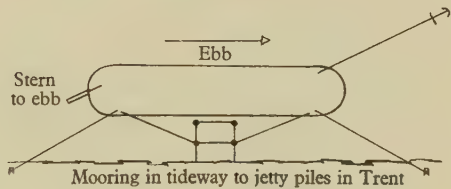


Fig. 12

Mooring in Humber at jetty to keep from rolling on jetty

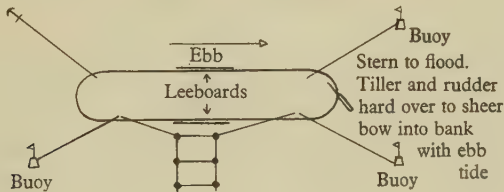


Fig. 13

First drop the anchor at about 45° from where the vessel's head wants to be. Take a rope or line to the back spring post and slack away chain, then put on all ropes, make the stern rope fast and push the ship off with the pole until the stern is a little further off, then the head, heave the anchor tight and take a weather hitch (Fig. 11) with the chain on the bitts so it cannot slip. The reason for keeping the head nearest the bank is so that the current¹ does not get inside and break her head off the bank. The lamps on a keel

¹ Non-tidal.

were two side lights (Fig. 14) which were fitted on light boards; they were fixed on irons which went through the rails. The stern lamp (Fig. 15) was fixed on an iron which fitted in an oblong slot which went through the horse timbers, when not in use it went through the hole in the back of the lamp.

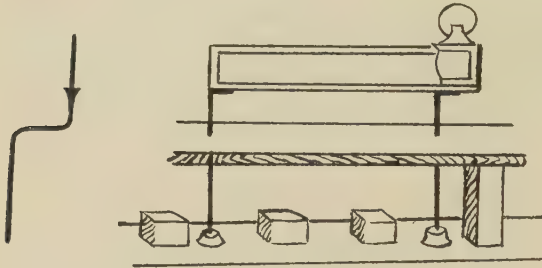


Fig. 14

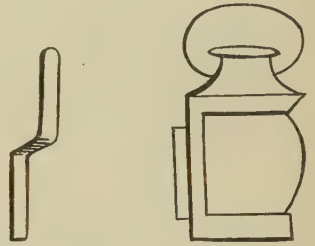


Fig. 15



Fig. 16

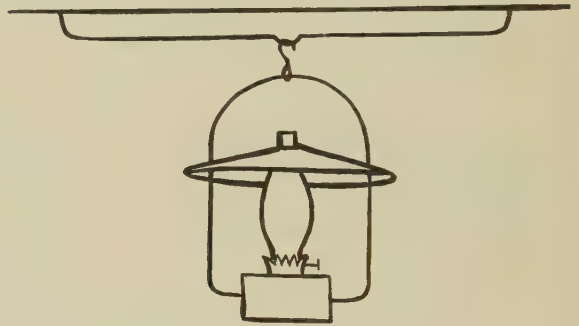


Fig. 17

We had a riding light, it had two glasses, one for anchor and the red glass was to fit when aground in a channel or on a sand. In the forecastle we used to have a lamp like a wall lamp to hang up on the cabin side or over the fire place (Fig. 16). The cabin lamp was a brass hanging lamp, it was made to hand or slide so you could move it about (Fig. 17). When driving with the tide up a narrow river like the Ouse, you pulled your riding light right up the masthead, this made it so that there was not so much glare and the bridgeman could see you coming a long way off. The bunks were about 6 ft. long the widest end was at the head. The skipper found the bedding for aft and the owners found the bedding for forward.

I used to have a bed tick and get it filled with oat chaff at threshing time, it was very soft and could be had off any farmer. Some keelmen had feather beds, it was mostly the men who lived on board with their wives and families. One had to be always on the watch for damp beds. I used to keep an old

newspaper under the bed and if it was crisp to the feel I knew the bed was dry. Also it was not wise to paint the bottom boards under the bunk as it stopped the boards from absorbing the moisture from the damp bed, it was likely to cause condensation.

In the old days a lot of keels had a water cask on deck; it was about 30 gal. it lasted quite a long time. Some iron keels had a tank fastened across the head-ledge in the hold just under the hatches with a pipe and a tap which led into the cabin. It used to fill from the tap; we used to fill up when we got to a wharf with a steam crane, they usually had a rubber pipe to lend us. I once saw a man called Wag Horsefall put the pipe into his tank about 5 o'clock when the craneman went home, he then went ashore for a pint, he had more than one and the next morning water was on top of his keelson and the tap still running, he had to start and pump out *Nancy* before he could get in to fill his granite chippings. Most keelmen could do a bit of sail repairing, they carried a palm and needle and a ball of twine. They could do small repairs to covers and sails. I once saw a keel called the *Vanguard*, she had a new mainsail and the skipper had made it himself; he had taken some sewing away on a trip and finally sewn them together and roped it in his front room at home, it was a good well-sewn and well-cut sail, made from Heywoods extra No. 2. cloth and sewn about five stitches to the inch. I once saw a man sew a tear in a foresail, it was about 6 ft. long, he kept on sewing for a long time and when he had nearly finished he had about a foot at one side and about 4 in. on the other; he doubled it over and put a few tacks in it.

Aids to Navigation

Not many keels had a compass on board, they were not much use in a strong tideway in the Humber, because in the upper reaches you did not go far before you were on the edge of a sand or setting across from a stone heap on the bank, and a compass was not much good, one could tell which way by the feel of the bottom, there was the tide edge in daylight and the North Star, would get you across in the dark. If it was thick you could work the anchor on the bottom or if it was a head wind you could usually see the bank before you hit it. A chart was no good, only for about two or three weeks, because of the ever changing sand banks. The best aid to navigation was the feel of the bottom; if a keel was running on the coast or on the low end of the Humber a compass was all right and so was a chart and lead but not above Hull.

I have been asked to say how long a keel was away from home, this is a difficult thing to say. When I was a boy there were some people in Ferriby called Horton, they used to be away from home for months on end and

their children with them. If a ship was in a village or port more than three days, I believe the children were required (by law) to go to school.

We will imagine a keel loaded in Grimsby, pit-props for Castleford; if he was a Grimsby keel he would wait in Grimsby for a S.W. wind, the first tide he would fetch about Barrow roads and bring up, the next place he could ride would be South Ferriby, he'd go there next tide being dark. The next day he would go round Whitton Sands in daylight and bring up at Blacktoft or Saltmarsh. If he had a wind he might get right up to Goole. The next day he would either get a tug up to Castleford or if a horse he would go to Kottingley and another horse into Castleford the next day; it would take two days to unload, he would then get a load back from one of the coal pits nearby, perhaps Allerton Bywater or Fryston Airdale or Weldale. He would get down to the pit and wait a turn to load then he would get a tow down to Goole again. He would come out of Goole at high water, if it was calm, drive down to Whitgift or Blacktoft, if a good breeze he may come into Walker Dykes and bring up at Pigeon Cote farm. From here he would have to have a wind to get him round Whitton, he would perhaps spend two or three more tides to get him down to Grimsby.

Hull to Lincoln

We will load cattle cake in Hull Harbour. We drop down harbour into Hull roads, at flood we take one reef because the wind was west and strong, and set off turning in and out amongst ships at anchor and sand banks. We get up into the Trent about an hour before high water when we get in smooth water we shake out the reef. It is now a beam wind, we sail up to Keadby, there is still a draw of tide and wind, so we blow for Keadby Bridge, which opens and we sail through. It is nearly high water so we set the topsail and are soon past Burringham and we may get to Butterwick to ride; we will try it, it is nearly high water (if we don't fetch we shall have to come back to Burringham to anchor). However we get up to Butterwick and drop anchor, the next tide we drive¹ that is trail the anchor on the bottom, as it is dark and we only get up to Ouston Ferry, the next tide we got up to Gainsborough through the bridge and hung on to the Great Northern Wharf, the next tide we get to Torksey, here we pen into the canal, then we sail along the canal until we get to Lincoln, we discharge in the Brayford and sail back to Torksey, there is nothing in Lincoln for Hull so we go up the river Trent and pick up a cargo of gravel for Hull. Most cargoes from Hull were either from steamboats in the dock or cattle food from the mills in the harbour. There are three large flour mills, these send

¹ This was always done when it was too dangerous to sail or too narrow to tack.

flour and offals by keel.¹ The chief cargoes from Grimsby for keels are timber.

From Barton on Humber: bricks, tiles and fertilizers.
 From Ferriby Sluice: corn, sugar beet, bricks and tiles.
 From Wintringham: coal and slag.
 From Market Weighton: bricks.

From Broomfleet: Bricks.
 From Burton Stather: Bricks and red sand.
 From Keadby: Coals.
 From Goole: Docks coal.
 From Flixborough: Basic slag and iron from Scunthorpe.
 From Gunness: Iron stone and slag.
 From Selby: cattle cake flour.

Back loads from Trent above Gainsborough were mostly gravel, from above Goole sand, Goole canal and Sheffield canal most of the back loads were coal. There was a fleet of about eight sloopes running clay to a cement works in Hull from Barton and another fleet running cliff stone from river banks and whiting mills (cliffstone, chalk).

A method of unloading chalk stone on a river side, if the stone was to go over the side, a ship used what was called a blopping board²; it was fixed to the coamings, the big stones were heaved up by derrick on what were called cliff clams, then lowered on to the board and rolled over the side (Fig. 18).

I only remember two sailing ships with tanks in.³ One was the *Anglo-American* with paraffin, she was sloop-rigged. The other was I think the *Emma*, she was keel-rigged and was skippered by a one-armed man called John Green; it was a sight to watch him with his one arm, he could do almost anything, he used to come down the Ouse from Goole and bring up at Trent falls and wait for the next tide to take her up to Keadby.

In the list of keels—sloops it will be noticed on the *Nero*, she was built for my father when he was nineteen years old. When she was launched at Beverly my father was very ill with fever so Joseph Waddingham went to her and stayed in her; one night in 1907 he was picked up and given a tow by a steam keel, in Swynfleet reach the S.S. *Gwynwood* smelled the bottom when passing the *Nero* and caught the *Nero* a glancing blow, this caused the

¹ There were no brokers, the Master called at the office of people who were likely to have a cargo or they sent someone to look for a ship.

² Only used when tipping stone into the river to make a new bank or training wall.

³ For oil; the tank was fitted in the hold.

tiller to fly over and knock Captain Waddingham over and he was drowned, he was picked up ten days later at Hook, then his son Henry went skipper of the vessel, he stayed until 1914, then my father went skipper and I went mate with him 1915, we got another skipper in 1917, I stayed on as mate, in 1919 I went skipper of her I was then eighteen years old. I stayed till 1935 then I went ashore to work and the same Henry Waddingham came back to her, in 1937, he was knocked overboard in Hull Roads and was drowned¹ 30 years after his father off the same ship. I went back for a bit but soon found another skipper, one of my old mates Fred Harness.

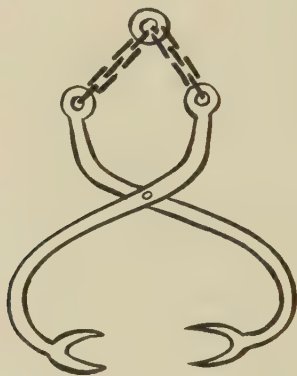


Fig. 18

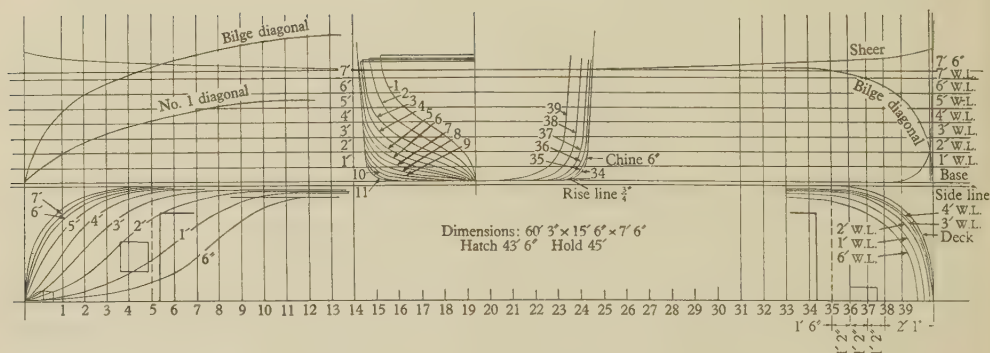


Fig. 19. Lines of a wooden keel built c. 1917, designed and built for the Sheffield trade; the last keel to be constructed by Messrs Richard Dunston Ltd., Shipbuilders, Thorne, nr. Doncaster. The original drawing was kindly lent by the above firm so that a copy could be made for this article.

¹ The *Nero* was turning up through Hull Roads and the skipper was seen lowering the leeboard; it is thought he was hit by the boom and knocked overboard. An engine was fitted soon after that.

If a ship was caught on a lee shore unloading stone or coal without any chain out, he had to get the anchor and chain on a hatch and slide it down the mud.

A keel called the *Marly Hill* was sunk on the Whitton Sands; after many years buried she was washed out of the sand and was salvaged and rigged out and sailed again.

A keel called the *Masterman* grounded on the plumb edge of a sand at Whitton, the skipper went ashore poaching and left his wife and children on board, the ship rolled over and sank, the women and children were drowned.

If a keel grounded on a sand bank, the sand would wash away from both ends and leave the middle high and dry, this would either push the middle of the ship up or break its back.

RECORDS

LIEUTENANT EDWARD SNEYD, ROYAL NAVY,
OF KEELE HALL, STAFFORDSHIRE

*Contributed by Commander J. H. Owen, R.N. and
Sir George Barnes, M.A., D.C.L.*

Edward Sneyd was the son of Ralph (1723-93) and younger brother of Walter (1752-1829). He was baptized at Keele in December 1745.

He entered the Navy at the age of twelve and a half in 1767. Nine years later, in the early days of the American Revolution, he was taken prisoner when the ship he commanded was captured by some American cruisers. He afterwards escaped, but lost his life while trying to rejoin the British fleet.

His first ship was the *Katherine*, one of the royal yachts, commanded by Alexander Hood, the future Lord Bridport. He joined her in April 1767 in the quality of captain's servant and served in her for a little over a year, during which it is probable that she remained in the Thames. From the yacht he went to the frigate *Venus*, 36 guns. This ship was commissioned by Captain Barrington in June 1768 for the instruction of H.R.H. Prince Henry Frederick, Duke of Cumberland, who then entered the Naval Service. H.R.H. joined the ship as a midshipman, succeeded Barrington as captain in November, and hoisted his flag as a rear-admiral, with Barrington as his flag captain, in March 1769. Sneyd joined in August 1768 as a captain's servant, was rated midshipman when the Prince assumed command, and left the ship when H.R.H. became an admiral.

Sneyd next served for three years as a midshipman in the *Alarm* 32, Captain Jervis (the future Earl of St Vincent). During the few months he was in the *Venus* she had been to Minorca and back, but spent most of her time at Portsmouth. It may be that her future service was uncertain (in fact, she was very little at sea during the rest of the commission) and that Sneyd's friends thought he would be better in a more active ship. Jervis was both a close friend of Barrington's and a Staffordshire neighbour of the Sneyds. At any rate, in March 1769, Sneyd was removed by Admiralty order into the *Alarm* at Portsmouth, where she was preparing for a commission in the Mediterranean. There he was to learn his profession under probably the best captain and best instructor of youth in the Navy.

In May 1772 the *Alarm* went home, but Sneyd remained in the Mediterranean. The Commander-in-Chief, Rear-Admiral Sir Peter Denis, took him into his flagship, the *Trident* 64, for a year and then sent him to the *Scorpion* sloop, Captain Elphinstone (the future Viscount Keith), who was himself a former midshipman under Jervis and had been first lieutenant of the *Trident* when Sneyd joined her. The *Scorpion* went home in June 1774, and was afterwards stationed on the east coast of Scotland. Sneyd left her in March 1775, having passed his examination for promotion to lieutenant on 1 February.

By the regulations of those days a man had to serve six years at sea, two of them as a midshipman, before he might take his examination. Sneyd had already completed his time as midshipman before leaving the *Alarm*, so his rating in the last two ships was able seaman. Had he been allowed to continue—unnecessarily—as a midshipman, he would have deprived another young man of a precious opportunity.

In March 1775 he sailed in the *Otter* sloop for North America, where he joined the *Preston* 50, Captain Robinson, flagship of Vice-Admiral Samuel Graves, the Commander-in-Chief: he joined her at Boston on 24 April, a few days after the skirmish at Lexington that started the war.¹ On 12 August the Admiral appointed Sneyd acting lieutenant and on 19 September he was confirmed in that rank. Then on 27 December he was appointed lieutenant and commander of the *Bolton* armed brig. In her Sneyd had his few weeks' experience of true active service.

The *Bolton* was a small vessel built at Boston and commissioned in the summer of 1775 by Lieutenant Thomas Graves, a nephew of the Admiral's. She had a crew of thirty and six very small guns. When Admiral Shulldham arrived at the end of the year to take command of the Station, Lieutenant Graves chose to go home with his uncle, so he and Sneyd changed places. Sneyd joined his command in the middle of January 1776 at Rhode Island, where she was one of a little squadron of cruisers under Captain James Wallace of the frigate *Rose* 20; he had also the *Glasgow* 20, *Swan* sloop 14, half a dozen armed tenders, and a storeship. They were employed, so Captain Wallace reported to the new Commander-in-Chief, cruising off the coast, making raids on shore, and 'harassing the rebels as much as possible'.

Early in March, however, the British forces had to abandon Boston, and fleet and army prepared to retreat to Halifax in Nova Scotia. Admiral Shulldham and General Howe decided that Wallace's ships would be more useful elsewhere, so the Admiral sent orders for the squadron to disperse and the ships to perform other services. These orders reached Rhode Island in the sloop *Nautilus* on 30 March—a few hours after the *Bolton* had returned from a cruise with a prize called the *Snow Bird*. With his prizes Wallace had then well over a dozen ships under his care; and he decided they must sail in company and separate at sea. But first he sent the *Bolton* and the *Hawk* tender (an armed schooner commanded by his son) to cruise off Block Island, twenty miles to seaward, 'till joined by us'. They sailed accordingly on 2 April. They did not rejoin.

A rebel squadron was at large: six ships of the same force as Wallace's regular men-of-war, commanded by Esek Hopkins. These ships had sailed from the Delaware in February, raided the Bahamas in March, and then steered for New London in Connecticut, the next colony west of Rhode Island. On 4 April, arriving off Block Island, they found and caught the *Hawk*. On the 5th the *Bolton* fell into their hands.

Sneyd sighted the Americans at sunrise. He took them for the principal ships of Wallace's squadron, which of course he expected to see, and stood towards them. An hour later he could see they were strangers, so he steered away under all possible sail. It was no good. First the *Columbus* came up, next Captain Hopkins himself in the *Alfred*—frigates as powerful as the *Glasgow* and the *Rose*, with each a broadside ten times as heavy as the brig's, though she returned their fire. Then came the *Cabot* and the *Providence*, brigs like the *Bolton*, but much larger. Hopkins ran close under the *Bolton*'s stern and hailed her to strike her colours, or he would sink her. Sneyd called his officers to the quarterdeck, showed them it was impossible to escape, and gave up his ship to the enemy.²

Wallace sailed out of Rhode Island Harbour the same day, but anchored again in the afternoon, apprehensive lest his sternmost ships should be left behind. Only the *Glasgow*

¹ In this ship, although still rated able seaman, he would live with the junior officers (mates and midshipmen) who included the future Lord Collingwood and Alexander Ball, who became the famous Governor of Malta.

² The other two American ships, which did not close the *Bolton*, were the *Andrew Doria* brig and the *Fly* schooner.

went on, apparently through some misunderstanding. Before daylight next morning, 6 April, she too met the Americans. She made a running fight of it, beating off the enemy ships in turn; and after several hours Hopkins gave up the chase, fearful that he might meet with Wallace and the rest of the British squadron. It may have been some consolation for poor Sneyd and his men, then prisoners on board Hopkins's ship. They were landed at New London two days afterwards.

A year later the Americans released some of the officers and men of the *Bolton*, headed by John Dowson, the master and second in command. They were tried by court martial at New York on 10 June 1777. Having heard the evidence, principally of Mr Dowson and the midshipman of the brig, the court found that 'every proper precaution was used for the preservation of the said brig'; they therefore acquitted 'the officers and crew thereunto belonging of any misconduct or neglect therein'.

Edward Sneyd was not there to receive the approbation of his seniors. He and four other prisoners of war had escaped in November 1776 from a prison inland, and made their way to Norwich, a dozen miles up the river from New London; there they seized a canoe in which to reach the sea and cross to Long Island. But they were over-set in The Race at the east end of Long Island Sound, and all were drowned except one, the former boatswain's mate of the *Bolton*.¹

Thus Sneyd had distinguished patronage in the Navy. Bridport, Barrington, St Vincent, started him on his way. He served in good ships and was promoted punctually in accordance with the regulations. The circumstances of his death show him to have been a man of courage.

It seems probable that Jervis was his real patron—that, not having a ship himself when the time came for Sneyd to enter the service, Jervis introduced him first to Hood, under whom Jervis had served as first lieutenant in the previous war, and later to his friend Barrington. Then, on being appointed to the *Alarm*, Jervis evidently arranged to take Sneyd as one of his midshipmen. What we should like to know is Sneyd's connexion with Admiral Graves.

APPENDIX I

Edward Sneyd's service in the Royal Navy, 1767-76

Ships	Guns	Qualities	Dates	Captains
<i>Katherine</i>	8	Capt. servt.	15 Apr. '67- 3 July '68	Alex. Hood
<i>Venus</i>	36	Capt. servt.	9 Aug. '68- 3 Nov. '68	Sam. Barrington
<i>Venus</i>		Midshipman	4 Nov. '68-10 Mar. '69	H.R.H. Duke of Cumberland
<i>Alarm</i>	32	Midshipman	10 Mar. '69-11 May '72	John Jervis
<i>Trident</i>	64	Able seaman	12 May '72-22 July '73	Chas. Ellys
<i>Scorpion</i>	14	Able seaman	23 July '73-12 Mar. '75	Geo. Keith
<i>Otter</i>	16	Able seaman	8 Mar. '75-24 Apr. '75	Elphinstone
<i>Preston</i>	50	Able seaman	24 Apr. '75-18 Sept. '75	Matt. Squire
<i>Preston</i>		Lieutenant	19 Sept. '75-26 Dec. '75	John Robinson
<i>Bolton</i>	6	Lieut. and commander	27 Dec. '75-17 Nov. '76	(Self)

Note. Sneyd was acting 3rd Lieutenant of the *Preston* from 12 Aug. '75 until commissioned on 19 Sept.

¹ The story of the attempted escape comes from Sneyd's sailor servant, who had it from the boatswain's mate. The account is now in the possession of the University College of North Staffordshire—see Appendix II.

APPENDIX II

'Account of the circumstances attending the death of Lieut. Edward Sneyd, 1776, while serving in the American War.

In the handwriting of his brother Col. [Walter] Sneyd, amongst whose papers it was found by me. W.S.'

Note. This account is amongst the Sneyd papers at Keele Hall, which are now the property of the University College of North Staffordshire. The Hall was bought by the College in 1949 from Colonel Ralph Sneyd, nephew of this W.S. (Walter Sneyd, who died in 1888).

On the 5th day of April the Bolton Brigg commanded by Lieut. Edward Sneyd was taken by a rebel Fleet consisting of nine sail under the command of one Hopkins, soon after they had engaged the Glasgow. Mr Sneyd fought them with undaunted bravery and great conduct, and even after he was surrounded by their whole Fleet, he gave them two broadsides and two shells before he struck; we were carried into New London Harbour, and every man put in irons, because we would not inlist with the Rebels; they allowed us only four ounces of Bread per day and four ounces of Pork to last us two days. We defied all they could do and were determined by the example and encouragement of our commander, Mr S (who in no respect fared better than the rest) to die by our colours rather than purchase life by ingloriously deserting them. After remaining in this deplorable condition 17 days, they sent us up to Windham prison in Connecticut. Mr Sneyd took me for his servant, as the villains allowed him no hand of attendance in his confinement, in short the barbarous usage he received from them in consequence of the courageous defence he had made and his endeavours to prevent his men from deserting their colours, is beyond anything I can explain. They took his parole from him which he had enjoyed but for a very short time and confined him in a dungeon; so inveterate were they in their resentment towards him that they even offered me my liberty if I would leave him, but I scorned their offer, and told them I would never quit him as long as he remained in such a situation. The villains made not the least difference betwixt him and the private sailors, and took from him several presents which a Mr Molbon had made him to have rendered his confinement more tolerable.

In this dismal situation they kept him from April till November, when tired of such a miserable life, Mr Sneyd declared his determination of endeavouring at all events to escape and desired those who were of his opinion should join him, as he preferred death itself to remaining in the situation they then were. Mr Cooke a midshipman belonging to the Scarborough and three others immediately declared they would go with him. In the beginning of November they broke the Jail, travelled to a town called Norwich, where they seized a small canoe with which they resolved to attempt to cross the Sound to Long Island, but most unfortunately they got into a Race (occasioned by the different setting of the tides) which presently overset them, when Mr S. and three others, after holding fast to the canoe for many hours, were at last drowned. The man that was saved was Boatwain of the brig who sent us this melancholy account.

When he left Windham he gave into my charge a bundle of letters and some other things with his journals to return to him if happily we should ever meet again.

Note. The writer was mistaken in thinking the *Bolton* met the American squadron after their engagement with the *Glasgow*. As the *Bolton* was not allowed a boatwain, he must mean boatwain's mate.

REFERENCES

P.R.O. Admiralty records.

Series 1. Admirals' Dispatches (Graves).

Reports of Courts Martial 1777.

6. Registers of Commissions and Warrants.

36. Ships' Muster Books (in which Sneyd served).

51. Captains' Journals (*Bolton* and *Rose*).

107. Registers of Passing Certificates for rank of lieutenant.

Admiralty Library.

Registers of Ships and Captains.

Navy Records Society.

Barrington Papers, vol. 1; Keith Papers, vol. 1; Sandwich Papers, vol. 1.

Naval History Society (U.S.A.).

Despatches of Molyneux Shuldham.

D.N.B.

Hood, Alexander (Baron Bridport).

Jervis, John (Earl of St Vincent).

E. S. Maclay, *A History of the United States Navy*, vol. 1.

THE HIRED ARMED SHIPS OF KENT

Contributed by M. A. N. Marshall

When the warfare of the end of the eighteenth century was renewed in earnest in 1803 there was a further demand for hired ships, chiefly cutters, to act as auxiliaries to the Fleet in the home waters, and as despatch ships, or as convoys, and for many other purposes. There were no hired ships in 1802, but from 1803 to 1815 the number steadily increased. The ships were hired by contract between the owners and three commissioners of the Admiralty. The owners had to supply the guns and stores, and to find the crews, and they were expected to conform strictly to the terms of the contract. Deductions were made from the bills sent in by the owners if there was at any time a deficiency in the complement of the crews; the ships, consequently, were often run at a loss to the owners whose one difficulty was to find and retain their crews. It was the shipowners of Kent who responded most nobly to the demand for hired ships, and their full story has yet to be written. The following are the chief of these ships; they are classified according to the location of the owners; the majority were of Dover and Deal, and these ports hummed with activity during these years. The ships were hired either continuously during the dates given, or in some cases rehired under a new contract. The number of the crews often varied each year. The amount of the annual expense of some of these ships to the Admiralty in 1804 is added to the record. Some of these ships had been hired previous to 1801 when they were then discharged.

*Dover**Active* (2). 78 tons, 8 (4 lb.) carriage guns, 27 crew. Master, John Middleton.*Owners.* Messrs Collett and Thomsett, of Dover, later, J. Minet Fector, of Dover, and John May and Co. of Folkestone.*Hired.* 1803 to 1814. £2360.*Albion.* 76 tons, 6 (4 lb.) carriage guns, 27 crew. Captain, John May.*Owners.* John King, later, Messrs Hedgecock and Pascall.*Hired.* 1803 to 1812. £3626.*Alert.* 44 tons. 13 to 20 crew, 6 (12 lb.) carronades.*Owners.* John Gilbee and Sharp Hutchinson.*Hired.* 1804 to 1813.

- Althorpe*, renamed *Earl Spencer*. 163 tons, 14 (12 lb.) carronades, no swivels, 54 crew. Captain, Thomas Chitty.
Owners. John King, Thomas King, William Blake, Thomas Chitty.
Hired. 1804 to 1805. £4789. This ship foundered in the Channel in 1805.
- Anne* brig. 120 tons, 10 carronades, 39 crew.
Owners. Peter Becker and Richard Jell.
Hired. 1804 to 1809.
- Ant*. 48 tons, 4 guns.
Owner. Richard Mowll, junior.
Hired. 1803 to 1810. Employed in the impress service, and manned by the Admiralty.
- Arthur*, late *Venus* (2). 70 tons, 6 (3 lb.) carriage guns, 24 crew.
Owner. J. Minet Fector.
Hired. 1803 to 1805. £2113. The ship was captured by a French squadron in the Mediterranean in January 1805.
- Athens*, late *Venus*. 50 tons, 10 (4 lb.) carriage guns, 24 crew.
Owner. J. Minet Fector.
Hired. 1804 to 1805. £1695.
- Betsy*, late *Phoebe*. 60 tons, 6 (12 lb.) carronades, 20 crew.
Owner. J. Minet Fector.
Hired. 1803 to 1804. £1905.
- Britannia*. 69 tons, 6 (3 lb.) carriage guns, 24 crew. Master, John Power.
Owner. Henshaw Latham.
Hired. 1803 to 1811. £2096.
- British Fair*. 71 tons, 6 (3 lb.) carriage guns, 3 (12 lb.) carronades, 23 crew. Master, Richard Rogers.
Owner. Henshaw Latham.
Hired. 1803 to 1814. £2045.
- Camperdown*. 159 tons, 14 (12 lb.) carronades, no swivels, no head, lute sterned, 53 crew.
 Master, James Murray Cowham; Solomon Bevil, mate.
Owner. John King; later, John Iggulden of Deal.
Hired. 1804. £4677.
- Charles* schooner. 118 tons, 40 crew.
Owner. Thomas Lloyd.
Hired. 1811 to 1814. The ship was with Sir Richard Strachan's squadron at Flushing 1811 to 1812.
- Countess of Elgin*. 78 tons, 8 (3 lb.) carriage guns, 25 crew. Master, Richard Hammond.
Owner. Henshaw Latham.
Hired. 1803 to 1814. £2232. The cutter was with Sir Richard Strachan's squadron off Flushing 1813 to 1814.
- Courier*. 114 tons, 12 guns, 38 crew.
Owners. Messrs Becker and Jell.
Hired. 1805 to 1807.
- Dart*. 56 tons, 6 guns, 21 crew.
Owner. J. Minet Fector.
Hired. 1803 to 1815.
- Dolly*. 60 tons, 22 crew.
Owners. J. Minet Fector and John King.
Hired. 1803 to 1804.

Dover. 49 tons, 13 crew. Master, William White.

Owner. Thomas Spice.

Hired. 1809 to 1810. The cutter was employed chiefly as a despatch ship.

Drake. 129 tons, 12 (12 and 6 lb.) carriage guns, no swivels, 43 crew. Captain, Matthew King.

Owners. John King, Thomas King, Nicholas Ladd Steriker, shipbuilders.

Hired. 1804 to 1805.

Duchess of Cumberland. 66 tons, 8 (3 lb.) carriage guns, 23 crew.

Owner. Henshaw Latham.

Hired. 1803 to 1805. £2008.

Earl Spencer. 141 tons, 12 (12 lb.) carronades, 42 crew. Master, William Forsyth.

Owner. J. Lewis Minet.

Hired. 1803 to 1814. £3832.

Earl St Vincent. 194 tons, 14 (12 lb.) carronades, 60 crew. Master, Thomas Finnemore.

Owner. John King.

Hired. 1804 to 1806. £5413.

Fanny. 181 tons, 28 crew. Master, Thomas Gittens.

Owner. J. Lewis Minet.

Hired. 1804.

Favourite, renamed *Florence* in 1804. 72 tons, 6 (3 lb.) carriage guns, 25 crew. Master, Abraham Hammond.

Owner. Henshaw Latham.

Hired. 1803 to 1811. £2219. Charles Bostock, master in 1811, was described in Henshaw Latham's letter to the Admiralty as a 'very active, zealous man'.

Flying Fish schooner. 74 tons, 26 crew. Master, William Mate.

Owner. Henshaw Latham.

Hired. 1809 to 1814. The schooner was with Sir Richard Strachan's squadron off Flushing 1809 to 1811, and also at the Scheldt.

Fox, renamed *Friske* in 1804. 98 tons, 8 (4 lb.) carriage guns, 30 crew.

Owner. John King and Collett and Thomsett.

Hired. 1803 to 1806. £2728.

Francis, late *Nancy*. 46 tons, 6 guns, 19 crew. Master, William Kay.

Owner. William Crow.

Hired. 1805 to 1806.

Griffin. 71 tons, 6 (3 lb.) carriage guns, 24 crew.

Owner. John King.

Hired. 1803 to 1805. £2106.

Hawk. 124 tons, 10 (12 lb.) carronades, 40 crew. Master, James Cullen.

Owner. J. Minet Fector.

Hired. 1803 to 1805. £3569. The route of the cutter was Yarmouth, the Channel, Belfast Lough.

Hind brig. 100 tons, 8 guns, 30 crew. Master, James Cullen, in 1804.

Owners. J. Lewis Minet, Collett and Thomsett and John Iggulden.

Hired. 1803 to 1804 as a convoy for merchant ships. In 1804 John Coad was paid £4. 19s. for taking the cutter from the Chesapeake to Hampton Roads and from there to sea without the assistance of any other pilot.

Hope. 84 tons, 8 (12 lb.) carronades, 30 crew.

Owner. Richard Emmerson.

Hired. 1803 to 1805. £2605.

Joseph. 98 tons, 8 (4 lb.) carriage guns, 30 crew.

Owners. J. Lewis Minet, James Cullen and John Gilbee.

Hired. 1803 to 1809. £2721.

King George. 128 tons, 12 guns, 40 crew.

Owner. J. Minet Fector.

Hired. 1803 to 1804. In September 1804 the cutter was grounded in the mouth of the Seine on the ebb tide and set on fire and destroyed by the crew who escaped. She had been renamed *Georgiana*.

King George. 58 tons, 6 (4 lb.) carriage guns, 22 crew. Master, Thomas Mercer.

Owners. J. Minet Fector, Matthew King, Collett and Thomsett.

Hired. 1803 to 1814. £1886. The cutter was with the Flushing squadron 1811 to 1812.

Lord Nelson, renamed *Frederick* in 1804. 68 tons, 6 (4 lb.) carriage guns.

Owner. John King.

Hired. 1803 to 1805. The *Frederick* cutter was not coppered and it was discharged because it was not competent on account of size and deficiency of crew to cruise against the enemy.

Lord Nelson.

Owner. Samuel Collett.

Hired. 1807 to 1809. The cutter was lost on 5 August 1809.

Minerva. 68 tons, 6 (3 lb.) carriage guns, 24 crew.

Owner. Henshaw Latham.

Hired. 1803 to 1804. £2090.

Nancy, see *Francis*.

Nile lugger. 170 tons, 14 (12 lb.) carronades, no swivels, 50 crew. Master, John Irons, Jenkin Cullen, mate.

Owners. William Crow, John Blake, and others.

Hired. 1804 to 1806. £4576.

Nymph. 160 tons. 10 (4 lb.) carriage guns, 23 crew. Master, James Boxer.

Owners. J. Minet Fector and James Boxer.

Hired. 1803 to 1804. The cutter was with the Flushing squadron 1811 to 1812.

Ox lugger. 55 tons, 20 crew.

Owners. Robert Hammond and John Blake.

Hired. 1807 to 1808.

Phoenix. 79 tons, 8 guns, 25 crew.

Owners. J. Lewis Minet, Collett and Thomsett.

Hired. 1803 to 1804.

Princess Augusta. 71 tons, 8 (4 lb.) carriage guns, 26 crew. Master, James Cullen, in 1809.

Owner. John King.

Hired. 1803 to 1814. £2240. The cutter was with the Flushing squadron in 1809.

Princess Charlotte, schooner. 96 tons, 8 (12 lb.) carronades, 30 crew.

Owner. Henshaw Latham.

Hired. 1804 to 1805. £2698. The cutter was taken up again under a new contract and employed as a despatch ship with 2 (3 and 4 lb.) carriage guns, and 12 crew, in 1805.

Princess of Wales. 106 tons, 10 (12 lb.) carronades, 36 crew. Master, James Slaughter.

Owner. John King.

Hired. 1803 to 1814. £3164.

Queen Charlotte. 75 tons, 8 (4 lb.) carronades, 25 crew.

Owners. J. Minet Fector, Collett and Thomsett.

Hired. 1803 to 1814. £2211.

Queen Charlotte. 60 tons, 6 (12 lb.) carronades, 25 crew. Master, James Thomas.

Owner. J. Minet Fector.

Hired. 1803 to 1812.

Rose. 52 tons, 6 (3 lb.) carriage guns, 20 crew.

Owner. John King.

Hired. 1803 to 1804. £1705.

Spider. 114 tons, 10 (12 lb.) carronades, 40 crew.

Owner. Henshaw Latham.

Hired. 1803 to 1804. £2839.

Swift. 100 tons, 8 (12 lb.) carronades, 30 crew.

Owner. J. Minet Fector.

Hired. 1803 to 1806. £2732.

Swift. 76 tons, 8 guns, 25 crew.

Owner. J. Minet Fector.

Hired. 1803. The cutter was taken by a French privateer in the Mediterranean in April 1804.

Telemachus. 10 guns, 40 crew.

Owner. John King.

Hired. 1803 to 1804.

True Briton, schooner. 183 tons, 30 crew.

Owners. John Gilbee and Peter Popkis.

Hired. 1812 to 1814.

Venus. 6 guns, 24 crew.

Owners. Collett and Thomsett.

Hired. 1803.

Deal

Active (1). 71 tons, 25 crew. Renamed *Lord Keith* in 1804.

Owner. John Iggulden.

Hired. 1803 to 1805.

Champion. 48 tons, 6 (3 lb.) carriage guns, 20 crew.

Owner. John Iggulden.

Hired. 1803 to 1805. Renamed *Sabina* in 1804.

Cygnets. 12 guns, 40 crew.

Owner. John Iggulden.

Hired. 1803.

Fox. 8 guns, 30 crew.

Owner. John Iggulden.

Hired. 1803 to 1804.

Lord Keith, formerly *Active* (1). 71 tons, 6 (4 lb.) carriage guns, 27 crew. Master, David Whitby.

Owner. John Iggulden.

Hired. 1803 to 1808. The cutter was taken possession of by the enemy when a violent gale necessitated her running into the river Elbe in January 1808.

Speculator lugger. 93 tons, 10 (4 lb.) carriage guns, 33 crew. Master, John Warman.

Owner. John Iggulden.

Hired. 1803 to 1813. £2874. This lugger was with the squadron at Walcheren 1809, and it was discharged because it was not well armed and not completely manned, and the guns single fitted.

Swan. 119 tons, 10 (12 lb.) carronades, 40 crew. Master, Francis Whittingham.

Owner. John Iggulden.

Hired. 1803 to 1811. £3530. The cutter was captured on 25 April 1811.

Folkestone

Betsey. 50 tons, 6 (3 lb.) carriage guns, 24 crew.

Owner. Joseph Sladen.

Hired. 1803 to 1804. £1695.

Folkestone lugger. 131 tons, 12 (12 lb.) carronades, 45 crew. Master, William Marsh.

Owners. Thomas Farley, Timothy Gittens, Jenkin Cullen.

Hired. 1803 to 1814. £3816.

Gambier. 109 tons, 35 crew. Master, Hammond.

Owners. Shares were bought by David Banks, shipbuilder, James Cullen, William Marsh, John Crews. The cutter was employed exclusively for convoying trade between Exmouth and the Downs.

Hired. 1808 to 1814.

Nimrod. 70 tons, 6 (3 lb.) carriage guns, 30 crew. Master, William Marsh, 1804 to 1809.

Owner. Joseph Sladen.

Hired. 1803 to 1814. £2104. The route of the cutter was the Channel and Plymouth.

Ox hovelling boat.

Owner. William Mayor.

Hired. 1809.

Ramsgate

Alert. 117 tons, 30 crew.

Owners. Edward Ellis and Sharp Hutchinson.

Hired. 1812 to 1814.

Chance schooner. 131 tons, 25 crew.

Owner. John Phillips.

Hired. 1805 for 6 months as a despatch ship.

Venus packet. 77 tons, 20 crew. Master, Frederick Gibbs.

Owners. Susan Laming of Ramsgate and Martin Price Gibbs of Dartmouth. The ship was employed for 6 months as a despatch ship, 1805.

NOTES

A NOTE ON THE NATIONAL MARITIME MUSEUM'S PHOTOGRAPH COLLECTION

Right from the start of the Museum in 1934 the collection of photographs with a maritime interest had been a very important object, and by the beginning of the war in 1939 several thousand negatives had been collected. It was not until 1947 though that the Society for Nautical Research began to take a really active interest in this particular section of the Museum's work. In the

spring of that year a small subcommittee was formed of members particularly interested in the collection of photographs, and many letters were written and sent out to various papers and journals explaining what was wanted. It was then suggested that the Society might buy a cine camera which could be used by interested members, and on occasions might be loaned to the Museum when a film was wanted of some specific subject. The money for this camera was collected by the subcommittee from certain members of the Society who were willing to subscribe to such an object, and a second-hand camera was bought. The result of this was that a film was made of the Falmouth oyster dredging boats, which still ply their trade under sail, and several other types of craft had their activities recorded. It was now felt by the Museum that the time had come for the purchase of a really first-class cine camera, and this was duly done so that now there are available two cameras, one the property of the Society and the other of the Museum.

In the meanwhile members had not been idle and the cine-film collection had benefited by the skill and generosity of Mr Basil Greenhill and Mr David MacGregor among others, both of whom have taken films for the Museum and then given them most generously to the growing collection of cine-camera films. At the present moment the Museum owns twenty-four films, of which about half have been taken by members of the Society and may therefore be classed as amateur films. A number of these amateur films have not yet been captioned or cut and made up into a proper continuous length; that is a job that the Museum has to consider how it may best be done. In addition to the twenty-four films mentioned above Mr Basil Greenhill has, over the last four years, made a number of films of the boats and vessels of Pakistan and also of the two sail-training barques owned by Japan, together with Japanese fishing vessels. Although these films have not yet been given to the collection the author has most kindly promised them to the Museum. When films become the property of the Museum the ideal position is that the master film be given and then a copy film can be made for showing in the projector; in this way the original film does not get worn out and if carefully looked after will last for years, while a copy film can always be made from it if wanted.

In addition to the cine films, Mr Greenhill took a very large number of still photographs, both in Pakistan and Japan, and these will eventually join the collection at Greenwich. Another fine lot of still photographs which the Museum has are those taken in the Bridgewater district by Mr W. A. Sharman; these are mostly of schooners and ketches of the period 1900-14. Mr W. C. Fox has given all the negatives taken by his father, mostly of the west country or of Scarborough, of about the period 1895-1920; these are magnificent photographs and number well over a thousand. A project which the Museum and the Society's photographic subcommittee are working at together, in conjunction with the Scientific Film Association, is the compilation of a survey of all films of a maritime interest; it is hoped that when the list is as complete as possible it will be published and available to the general public. This list will give the content of the film, its size, whether 16 mm. or 35 mm., and whether it is colour or black and white, its running time, when made and where it can be obtained. When completed this should be a most valuable work. In the past it has not always been at all easy to get photographs that have been loaned to the Museum copied; the Museum's photographic staff have enough to do with satisfying the demands of the public who want prints of objects on exhibition. Now, however, arrangements have been made with another government department whereby almost any number of copies can be made from a loaned print within a week or so. Before this arrangement had been made, offers to lend photographs were quite frequently turned down as it was felt that it was not fair on the lender to keep his photographs more or less indefinitely; it is hoped that such an occasion will not happen in the future. A further hope is that readers of this Note will realize that both the S.N.R. subcommittee and the Museum are working very closely together to increase the number of both still and cine photographs and to make the Museum's collection the best in the world, but that this desirable end is not so likely to be attained so quickly, unless the Society's members give of their willing help also.

H. O. HILL.

THE SANTA ANA 1533

When one reads of the well-nigh intolerable hardships and discomforts endured by seafarers in such ships as the Pilgrim fathers' *Mayflower*, and many another in the seventeenth and eighteenth centuries, it is interesting, and indeed agreeable, to turn back to a description of what a well-found and well-ordered ship was like 100 years earlier.

Here is how Fr. Don Juan Agustin de Funes, the Spanish Chronicler, describes the *Santa Ana*, the then latest addition to the navy of the Religion (i.e. The Sovereign and Military Order of St John), as she was in the year 1533.

'She was the new Carraca of the Religion, a great and superb ship of war. In addition to the great size of her anchors, cables, spars, and other parts of her equipment, she carried at various times as much as 900 tons of wheat from the coasts of Sicily and Spain. Her poop deck was so lofty that the masts of a galley lying alongside, did not reach it by three palms. She had six decks, the two below the water line being covered with lead sheathing fastened with nails of bronze, which did not corrode the lead as iron would, and so well laid was it that it were impossible to sink the ship even if she were attacked by a whole fleet.

'The Mainmast was built of several spars, and so thick that six men could not embrace it with their outstretched arms.

'She carried topsails, and top gallant sails(?) (*Perroquete y contra perroquete*).

'There was sufficient space on the upper deck, not alone for the working of the sails, but for handling of several small pieces of artillery.

'So strongly was she built and of the finest timbers, that no shot ever penetrated her hull on any of the many occasions on which she went into action.

'She had a spacious and elegant chapel dedicated to the glorious Santa Ana, her patron Saint. There was a great armoury, with many arms, offensive and defensive, sufficient to arm 500 men.

'The Grand Saloon, with Chambers and anti-chambers, provided lodging for the Grand Master and those of his Council when he undertook a voyage or a cruise. There was also a most commodious Great Cabin, with butteries and serving rooms, where the gentlemen dined. The Officers, who were duplicated, had accommodation sufficient for all of them.

'She had several galleries abaft the poop, wherein were many boxes filled with earth, in which grew dwarf shrubs and flowers, in the manner of little gardens or pleasaunces.

'No biscuit was ordinarily eaten on board; but fresh-baked bread only, two hand mills being constantly employed grinding wheat into flour. There was an oven of the capacity of thirty-six bushels for each baking. She carried sufficient fresh water to last for many days and it was issued abundantly.

'A Blacksmith's forge was provided, large enough for 3 smiths to work as freely as they could do on shore.

'Below the water line she was completely sheathed with lead, and because of this was so dry that any water that entered came from above.

'Her regular armament consisted of 50 pieces of artillery, *Culebrinos*, and *Canones reforzados*, and an infinite number of small pieces of all kinds, so that she may be regarded as a well-armed fortress, with every convenience one can imagine, for the gunners.

'For the good government of the personnel 300 persons were employed together with the requisite officers.

'The ship sailed and handled well, and when under sail at sea she presented a noble sight, with the many pictures, banners, and other great flags which she carried aloft.

'Finally she had two great barges, each of fifteen oars a side. One was towed astern, while the other was stowed inboard, together with five smaller boats, and sometimes galeots and fustas captured from the Turks.'

It is to be regretted that the Chronicler does not give the dimensions of this great ship; her length, beam, depth, draughts, etc.; though no doubt these details are known to people who make a study of such things.

This note is translated from the Spanish by Captain A. MacDermott, R.N.

THE DEVONSHIRE AND THE BATTLE OF BARFLEUR

With reference to the Notes in the November 1957 issue of *The Mariner's Mirror* (p. 332), Mr Carr Laughton has confused the *Devonshire* with the *Cornwall*. It was the latter ship that was built at Southampton, the *Devonshire* was built at Bussleton (Bursledon).

Dr Anderson's doubts, whether any of the three ships he mentions—*Bredah* (a 70, not an 80), *Cornwall* and *Devonshire*—were present at Barfleur, are confirmed by the following documents at the P.R.O.: Adm. 8/3, 51/4130, 33/151, 52/23. None, in fact, was there.

Laird Clowes merely copied the 'Ships in the Main Fleet' from the List Book for 1 May 1692 (Adm. 8/3), and took no account of the information contained in the 'Where employed' column; he also disregarded the list of 'Ships not in the Main Fleet,' which indicates that several frigates were working with the main fleet.

Laird Clowes correctly states that the *Royal Oak* did not join until after the action (she 'got into the fleet' at 2 p.m. on the 25th), but there are two other ships, besides the three mentioned by Dr Anderson, which also were not present. These were the *Plymouth* and *Chatham*, which were escorting convoys. Nor was the *York* present either. No logs have been preserved, but the pay book (Adm. 33/150) records that, on 18 May, one man was 'DSQ, Chatham'. On 5 May, she was reported to be still 'at Sheerness, wanting men'—on 26 April, 10 men were marked 'R', and a further 20 on 6 May. The *York* does not seem to have been a very happy ship.

Of the ships not in the main fleet, and not shown in Laird Clowes's list, the following were present during part or all of the operations (the spelling of personal names varies in different documents):

Dragon, 46. Captain William Vickars.
Falcon, 42, Captain Nathaniel Browne.
Greyhound, 16, Captain William Kiggins.
Hawk, f.s. Captain William Harman.
Mary Galley, 34. Captain Richard Griffiths.
Portsmouth, 32. Captain John Bridges (2).
Tiger Prize, 48. Captain Robert Sincock.

W. B. ROWBOTHAM.

LAUNCHING CEREMONY—AND SUB-CONTRACTING

In the *M.M.* for May 1957 I contributed a note on the gift given to Sir Hy. Johnson on the launching of the *James Galley* in 1676, and mentioned that the ship was actually built by Johnson, although Anthony Deane the younger is usually given the credit for building her. I must confess to having been too hasty in this matter. In fact, two other papers in the British Museum throw further light on the question, and are summarized below:

Add. MSS. 22183, f. 22.

(Agreement dated 11th December 1674 between Henry Johnson and Anthony Deane, whereby the former agrees to build a 6th rate at £6 per ton. Refers to an existing contract by Deane and the Commissioners of the Navy, dated 9th December 1674. The paper is endorsed:

75 ft. by the keel
 22½ ft. broad
 9 ft. 6 inches Depth in Hold.)

Add. MSS. 22183, f. 26.

(Agreement dated 1st March 1675/6 between Henry Johnson and Anthony Deane Junior, whereby the former agrees to build a frigate at £6. 10/- per ton. Refers to an existing contract by Deane and the Commissioners of the Navy, dated 21st February 1675/6, to build 'one complete ship or frigate to row and sail. . . .' The paper is endorsed:

'Mr. Deane promised. . . to give a present of £50 to Mr Johnson's eldest son when the ship is finished, and Mr Johnson promised to give the Foreman £30 for his pains. . . .')

The first document must refer to the *Lark* of 18 guns, built at Blackwall in 1675. The second refers to the *James Galley*, and shows that the 'gift promised at launching' was in no sense an official acknowledgement of perquisite but was only a private arrangement between the two shipwrights. It is of course possible that Johnson wished to secure the benefit of any gift actually due to Deane. The most interesting feature of the transactions, however, is that contracts could be sublet in this manner, presumably with the knowledge of the Navy Board. Financial intrigue of this nature must have flourished in Stuart times. In later papers in the same volume (ff. 37 and 42) it appears that William Hewer wrote to Johnson on 11 August 1677 to say that it had been decided not to build any of the thirty new ships by contract. Nevertheless, we find that on 8 March 1677/8, when Johnson had secured a contract to build four third rates of this programme, he made an agreement with Hewer whereby they agreed that 'Wm. Hewer take off the hand of Sir Henry Johnson two of the said ships to enjoy full profit and advantage of the same . . . Sir Henry Johnson to give advice . . .'.

W. SALISBURY

AN EARLY NELSON EPISODE

Little research has been made into the history of Nelson's service in the East Indies in the frigate *Seahorse*, Captain George Farmer, in the years 1773-6. In reading the ship's log (P.R.O. Adm./51/883) I came upon one interesting fact which seems to have eluded biographers. Nelson was first in action, at the age of 16, on Sunday 19 February 1775, when the *Seahorse* attacked an armed 'cruiser', rigged as a ketch. She was in the service of Hyder Ali, who caused us much trouble in Mysore.

The action lasted long enough for the *Seahorse* to fire a lot of ammunition. The expenditure is recorded as follows: 57 round shot, 2 of them double-headed, and 15 grape shot from the 9 pounders; 25 round shot and 2 grape shot from the 3 pounders. The ketch surrendered during the afternoon, and Captain Farmer took possession. The action was off Anjengo, on the Malabar Coast. The *Seahorse* was then on her way from Madras to Bombay.

This seems to have been the only belligerent service on a commission during which Nelson, on his own admission, learnt a great deal.

OLIVER WARNER

OCEAN VOYAGES OF THE PAST

By way of footnote to the interesting article on 'Dead Reckoning and the Ocean Voyages of the Past' in the February number of the *M.M.*, a quotation from a manuscript account of the voyage of H.M.S. *Resistance* in 1782 may be of interest.

In the above article Admiral Elliott is quoted as saying that 'we had no chronometers and knew nothing of the lunar observations even as late as 1803'. This was certainly true of 1782, when Captain James King (who became captain of the *Discovery* after the death of Cook and who was something of an astronomer in his own right) was appointed to the command of the *Resistance* frigate. His friend James Trevenen, a midshipman on Cook's last voyage, was his first lieutenant. The *Resistance* was acting as escort to a large convoy bound for Barbados. According to the manuscript biography of Trevenen written by Admiral C. V. Penrose in about 1805 the usual route to the West Indies was 'to run at first directly to the southwards, passing in general not at any great distance from the island of Madeira, and thence as direct as possible into the Trade Winds, which blow constantly from the eastward; and when arrived within their influence, steer to the westward for Barbados. By this means, being always correct in latitude, the errors in longitude become of no consequence, provided a good look-out was kept in time. But Captain King, whose scientific knowledge was too complete to allow him to hesitate about trusting firmly to it, and replying on the long approved skill of Trevenen, depended on the accuracy of the lunar observations for determining the longitude, and instead of the circuitous route above mentioned, steered from the first a direct course for his intended port. Nothing could exceed the surprise and terror of the masters of the merchant ships who, used only to the old jogtrot of their ancestors, were soon

bewildered and lost all kind of tolerable accuracy in their reckoning. But when they found that the skill of the circumnavigators had brought them exactly to the desired point nothing could exceed their admiration and astonishment. There still unfortunately exist in our naval service many officers, even of high rank, who profess an utter dislike to all calculations and cannot bear to see others soaring so high above the centre of their ignorance. This run to Barbados should be drawn on a chart and served up to them every morning with their breakfasts.' This new course had the added advantage that the convoy escaped a strong enemy force which was lying in wait for it on the usual route.

Is there any documented account of a similar course across the Atlantic before 1782?

CHRISTOPHER LLOYD

In their article in the *M.M.* of February 1958, Kaptain Sölver and Mr Marcus start with the question: 'Is it possible that seamen of the past made regular ocean passages by D.R. alone?' They then devote seventeen pages to establishing the fact that D.R. navigation is liable to be highly inaccurate. This, surely, is self-evident, but leaves the original question unanswered.

We know that a considerable proportion of early voyages did, in fact, end either in shipwreck or in failure to find their destination. The question can therefore be reworded: '*Allowing for a considerable percentage of failure*, is it possible that seamen of the past made regular ocean passages by D.R. alone?' This question, I feel, deserves further consideration. What follows is admittedly conjecture, but is based on a certain amount of experience of D.R. navigation in small sailing vessels.

Avoiding shipwreck

We are not here concerned with the risk of foundering on the high seas, but with whether it is possible for a small sailing vessel, whose master has no idea of her true position, to approach the land without being wrecked. The answer must vary with different coasts and different conditions of weather, but I submit that we can commonly say 'yes', given some, at least, of the following factors:

A skilful and cautious captain.

A small, handy vessel,

Good leadsmen and good lookouts.

Good ground tackle.

- A sailing and pulling boat, for sounding and surveying ahead of the ship, when entering narrow waters without either a large-scale chart or local knowledge.

Most important of all, *time* to take things slowly, heaving-to or anchoring at night and in thick weather.

Finding the destination

Here I assume that the master carries with him at least a general chart of the coast, and some sailing directions. Generally, perhaps, there will be somebody aboard who has made the voyage before, and can recognize the coast when he gets near his destination. These sources provide the clues to what is essentially a problem of identification.

The general nature of the coast is a dominant factor. I do not suggest that it would be possible for anybody to make regular voyages to Tristan da Cunha without latitude observations, but a destination on the eastern seaboard of North America would be quite another matter, and could, surely, be found (in time) by any captain able to keep his ship afloat.

To take a hypothetical example: a dead-reckoning navigator is armed with a crude general chart of the coast between Nantucket and Newfoundland, including a few remarks on the nature of the coast and hinterland, as seen from seaward, and the position of his destination (Boston) is marked on it. Arriving from England, he finds himself off a rocky coast, and turns so as to sail parallel to it. Finding that his course is now roughly south-west, he deduces from his chart that the coast could be either Maine, Nova Scotia, or parts of Newfoundland. After following it for

100 miles in the same general direction, he rules out Newfoundland. After another 50 miles, the coast breaks away to the north-west, and he follows it far enough to establish that he has in fact just rounded Cape Sable—the only possible interpretation.

He now has a rough fix, and can lay a course that will bring him to the coast of Maine in the vicinity of Portland. From here, he coasts to the southward, identifies Cape Ann, and so sails round it and into Boston. If, alternatively, he should overshoot Cape Ann, he will find himself in Cape Cod Bay, which is unmistakable, and will turn back.

Admittedly, he has run a risk of shipwreck on the way, and many ships did get wrecked. But the remainder could, in my opinion, have found Boston, or any other American port, without any form of celestial observation.

H. G. HASLER

May I add to the excellent article on Dead Reckoning which appeared in the February number of *The Mariner's Mirror* a few words on my experiences in the Second World War in this connexion?

I took command of an Armed Merchant Cruiser in September 1940 and was employed patrolling the Denmark Straits, returning to Greenock every 12 days or so for fuel and provisions. I noted in the course of the winter that the trip to and from the patrol line, which usually had to be carried out by dead reckoning—at least between Iceland and the Butt of Lewis—always seemed to show considerable error. There was one morning when the dead reckoning on the coast of Iceland placed the ship five miles inland, although fortunately we still seemed to be surrounded by sea.

Finally, after several patrols and some moments of anxiety I analysed the results carefully and realized that the ship always behaved like a horse hired from a livery stable. She invariably returned to her base at a faster pace than that at which she set out, although the engine-room telegraphs might be set at the same revolutions.

The Chief Engineer vigorously denied any such reflexions on his watch-keeping staff, but nevertheless a few firm words to all concerned in the engine room effected a magical cure.

E. H. LONGSDON

SHIPS BUILT AT IPSWICH IN 1741-2

(See *M.M.*, Vol. 43, p. 303)

I must apologize for my omission which has led the note on the *Hampshire* to run on into that of the *Granado*. To clear the point up, the *Hampshire*, 4th rate, 854 tons and 50 guns, was built by Barnard in 1740-1 and was broken up by Admiralty Orders in 1766. The *Granado* bomb, 270 tons, 74 ft., 9½ in. keel, was built by Barnard in 1741-2 to be fitted as a sloop and was as Oppenheim stated (*V.C.H.*, *Suffolk*, Vol. II, p. 244) sold in 1763. Having had some difficulty in reconciling the number of guns as given by official and unofficial sources in the eighteenth century, I avoided rating her as a 28-gun ship. I took care merely to say that she carried 28 guns without stating whether they were carriage or swivel guns.

A. G. E. JONES

AN APPEAL FROM THE UNIVERSITY OF DURHAM

The era of the Condominium Government of the Sudan, 1899-1956, is a vitally important period in the history of the British and Sudanese people. Unless we begin now to collect and preserve the written records of those years, an indispensable source of research for future students in this country will be lost.

The School of Oriental Studies in the University of Durham intends to build up an archive of the Sudan with special reference to this period. We are making an appeal to your readers to help us in this venture, and, as a guide to the kind of material which we are anxious to preserve, here are a few suggestions:

Old Sudan Almanacs, annual reports of the Sudan, periodical reports, surveys and other papers of departments of the Sudan Government, Sudan maps, Sudanese Parliamentary papers, papers

relating to municipal and local government, legislation of the Sudan, old Sudan Government quarterly lists, pre-1925 Egyptian Army lists, Sudan Defence Force lists, company reports and records, reports of the Sudan Chamber of Commerce, Muslim and Christian literature of all kinds with bearing on the Sudan, old newspapers and other periodicals in Arabic, English and Greek, papers of various Sudanese associations including the Sudan Congress, printed books and pamphlets by Sudanese and foreign authors concerning the Sudan, private diaries and personal papers of all kinds, old photographs.

We invite you to contribute what you can to our attempt to save this precious heritage, and we shall be glad if we may draw on your experience of the Sudan to direct us to other material which we may have overlooked. If you are in doubt whether anything you may have to offer would be of use, we should be most happy to advise you.

Please address any communications to Mr Richard Hill, School of Oriental Studies, Elvet Hill, Durham.

T. W. THACKER

RICHARD HILL

K. D. D. HENDERSON (Member of the Standing Committee for Oriental Studies)

QUERIES

10. (1958.) THE SETTING OF GAFF TOPSAILS IN SCHOONERS. It has, I think, not been widely noted that the tacks of the gaff topsails of merchant schooners and ketches were frequently passed through between the peak halliards and the gaff so that the lower part of the sail was on the weather side of the gaff, the upper part to leeward of the peak halliards. Several experienced schooner masters of my acquaintance have denied that this was ever done, and I have never met anyone who claimed ever to have set sails this way himself, but there is overwhelming photographic evidence in the National Maritime Museum and elsewhere that gaff topsails were set in this way, especially in North American ships.

The setting is shown, for example, very clearly in a photograph of the British three-masted schooner *Cumberland Lassie*, which is in the National Maritime Museum, and it even occurs in some photographs of Appledore, though the setting does not seem to have been used at all frequently in the west of England. It occurs frequently in photographs of American schooners. I have a magnificent photograph in front of me as I write of the first five-masted schooner, the *Governor Ames*, becalmed with every one of her five great gaff topsails set in this fashion.

Some experienced seamen to whom I have shown photographs of topsails set in this way have suggested that it was a lazy way to avoid having to reset the topsail when going about, at the cost of efficiency, looks, and the life of the sail. This might have been true in British ships, but I doubt it. The lazy man's system there seems simply to have been to leave the gaff topsail to windward on short tacks and the advantage to be gained by taking the trouble to pass the tack through the rigging would seem to be small, if any were gained at all. Moreover, in American schooners with their triatic stays the gaff topsails had to be reset every time the ship went about, and it was surely more trouble to set the sail with the tack threaded through between halliards and gaff than to set it in the ordinary way. The great New England schooners were not noted for sloppiness, and for a gaff topsail to set properly or this way it must have been cut to do so.

Though he said he had no experience of working with a topsail set in this way himself, one experienced British Master Mariner, trained in Appledore ketches, and now the master of a 10,000 ton motor ship, expressed the view that the setting was intended to increase the efficiency of the sail by making it possible to haul it much flatter. The extra wear on the sail, if it was cut for the job, would be slight, and the increase in efficiency, he suggested, would be worth the trouble and investment. Has any member of the Society an authoritative explanation?

BASIL GREENHILL

11. (1958.) I note that English dailies have recently taken to omitting the R.N. after the names of naval officers. For the enlightenment of foreign members, I should like to hear as to whether there has been a defined change of policy, and what was the usual practice, and what views of it are entertained by those concerned.

L. GUILLEUX LA ROËRIE

ANSWERS

5. (1958.). 'The Phips (not Phipps) salvage expedition of 1687 located the wreck in question and took £200,000 out of her. See C. H. Karraker, *The Hispaniola Treasure*, Pennsylvania University Press, 1934. Phips later became Governor of Massachusetts.'

CHRISTOPHER LLOYD

22. (1957.) TONNAGE MEASUREMENT. The reason why such a fraction as a 94th of a ton is found frequently in old tonnage measurements is that in the several formulae used for computing tonnage between 1694 and 1836 the divisor was 94. Apparently this divisor was chosen because when the product of the other factors in the formulae was divided by it each ton in the quotient had a value of about 56 cu. ft. which was approximately the amount of space occupied in a ship's hold by the wine barrel known as a tun.

ALLAN E. BAX

23. (1957.) TONS BURTHEN. Between 1773 and 1836 the tonnage or burthen of merchant vessels was computed in accordance with the Act 13, Geo. III, c. 74. The formula prescribed by this Act may be expressed mathematically as

$$\frac{(L - \frac{3}{8}B) \times B \times \frac{1}{2}B}{94} = \text{tonnage},$$

when L = length of the keel for tonnage measured in accordance with the Act, and B = breadth also measured in accordance with the Act. This method of measurement was known as Builders Old Measurement (B.O.M.) and continued to be used for naval ships until 1872. Its only virtue was its simplicity, but as an assumed depth equal to half the breadth was used in the formula instead of the actual depth there was a powerful incentive to ship owners to build deep narrow vessels with a cargo capacity exceeding their registered tonnage.

In 1836 a new method of measurement was brought into force by the Acts 5 and 6, Wm. IV, c. 56, with the object of preventing the tonnage cheating possible under the old measurement and discouraging the building of the unseaworthy type of ship it produced. This new system can be expressed as

$$\frac{L \times B \times D}{3500} = \text{tonnage},$$

when L = the length measured in accordance with the Act; B = the sum of the breadths measured at certain specified positions, some of such breadths being multiplied by 2 and others by 3; D = the sum of the depth measured at three specified positions, the midship depth being multiplied by 2.

The divisor 3500 was used in consequence of the addition and multiplication of the various breadths and depths, but it was computed on the basis that 92.4 cu. ft. of cargo capacity equalled one register ton.

This Method of measurement is referred to as Builders New Measurement (B.N.M.). It failed to achieve its objective and in 1854 was superseded by the Moorsom system which with minor modifications remains in force at the present time.

The subject of tonnage measurement is treated at some length by Sir George O. V. Holmes in *Ancient and Modern Ships* and briefly by Mr David R. MacGregor in *The Tea Clippers*.

ALAN E. BAX

22, 23. (1957.) TONNAGE MEASUREMENT AND TONS BURTHEN. These two queries can be answered together. The first general tonnage law (1694) laid down that the tonnage or burthen of a ship was length of keel \times breadth \times depth of hold \div 94. Presumably the divisor had been obtained by loading typical ships. In 1773 a further act of parliament gave a more complicated formula, later known as Builders Old Measurement. This was
$$\frac{(L - \frac{3}{8}B) \times B \times \frac{1}{2}B}{94}$$
 It was from these measurements, of course, that the 94ths of a ton were derived.

In 1835 a new measurement, based on the measured internal capacity of the ship, was introduced, to be superseded in turn by the Tonnage Law of 1854, also based on internal capacity but with more elaborate rules for ascertaining it correctly. This law, with various amendments, is still in force for merchant ships. For warships, Builders Old Measurement remained the official rule until 1872, when it was superseded by displacement. A detailed history of tonnage is to be found in White's *Manual of Naval Architecture*, 3rd edition, 1894.

J. CRESWELL

REVIEWS

MEDICINE AND THE NAVY, 1200-1900. By J. J. KEEVIL. Introduction by SIR HENRY DALE. Volume 1, 1200-1649. Edinburgh and London: E. & S. Livingstone, Ltd., 1957. Pages 242, besides introduction, preface and index.

More than fifty years ago the late Leonard Carr Laughton wrote a long letter pointing out the need for studying the effects of disease at sea on the course of naval history. He maintained that a true picture without such a study was impossible. Sir Henry Dale in his introduction to Surgeon-Commander J. J. Keevil's book remarks on the strange neglect of the subject. That neglect is at last made good. The book is well arranged, divided into three sections, the first and second containing five chapters each, and the third two chapters. Each section is followed by a bibliography. After the last is a chronology giving all relevant data from 1133 to 1649. The index is good. There are fifteen well-chosen illustrations, beginning with a reproduction of Article 7 of the Laws of Oleron from the Black Book of the Admiralty. Every quotation and important statement has its reference in footnotes. The value of being readable can hardly be over-stressed for a book like this. Dull history is merely chronology befogged. Dr Keevil is a good narrator.

The story is grim from the beginning and becomes ghastly.

Till long voyages were made and till large fleets were kept in commission for months there was no demand for a medical service afloat, any more than there was for one in the coasting trade that till 1914 engaged scores of small ships and hundreds of men. If a seaman were sick or hurt about 1200, when monastic orders were providing the great hospitals, he might hope to be cared for in one or more of the small monastic Houses of Pity or Maisons Dieu.

The first statutory claim for the invalided mariner came from the Customs of Oleron introduced into England by Eleanor, Duchess of Aquitaine, when acting with vice-regal powers during the absence of her son Richard I. By these customs a man whose illness or disability was due to his service had claims for care and maintenance that the shipmaster was bound to meet. Traces of this ancient code, Surgeon-Commander Keevil points out, are found in the modern hurt-certificate.

What sort of treatment would he find? Dr Keevil explains the medieval approach to medicine and surgery because it influenced men's thought and practice for centuries and hampered the provision of medical service afloat when the need had become urgent and the 'masyndews' were gone.

It is not easy now for anyone who has the least acquaintance with historical and scientific method to imagine the medieval way of looking at man and the world. It may be summed up by the text 'There were giants in those days'. Somehow, it was thought, the ancients had said all

there was to say. They had been wiser than modern man, although pagans and the road to wisdom lay in following their precepts. Granted this view, the course of medieval education was rational, founded on the academic ideas of Aristotle and Galen. A student began with the Trivium; grammar, logic and rhetoric. He learnt, that is, how to speak, how to think and how to express himself effectively. Next came the Quadrivium, which was scientific; arithmetic, geometry, astronomy and music. After this were the three faculties, Divinity, Law and Medicine for those no longer in *statu pupillari*. How was a knowledge of medicine to be acquired? The school of Hippocrates, the father of medicine,¹ taught that knowledge was the result of observation. The medieval mind overlooked this all-important precept and followed blindly the often erroneous and inadequate conclusion of the authorities. A Papal bull of Clement V, dated 8 Sept. 1308, lays down² which books students of medicine are to read. Chaucer's doctor of physic had read them. From the Hebrides to Damascus³ the medieval physician searched the scriptures in, often imperfect, Latin translations of the Greek or Arabic. Treatment was conceived of as a logical puzzle in which the four humours, hot, cold, moist, dry, on which the four temperaments, sanguine, phlegmatic, choleric, melancholy depended, were balanced afresh when changes in the blood, phlegm and bile had caused disease. The whole was strongly influenced by astrology, and charms might be useful on occasion. Some of the drugs used had effect, but often a bad effect.

Yet the patient did receive comfort sometimes, the comfort that he was in the hands of a learned man who would help him. And the physician could now and then be reassuring. Long acquaintance with the sick gives any man the ability of recognizing if the patient is really ill. The medieval doctor could sometimes say 'you will probably get well,' giving the confidence that so much helps recovery.

All the time knowledge was slowly accumulating in the great medical schools of Montpellier and Salerno.³

Medieval surgery was crude. The surgeon as his title tells was one who worked with his hands. Medicine and surgery were not branches of one profession. They might have become so with great benefit but for an unfortunate Papal decree. The Church very properly disapproved of the clergy's shedding blood. The Bayeux tapestry shows bishop Odo 'cum baculo suo': a mace instead of a sword salved the episcopal conscience. Now the Vatican was in earnest. In 1215 Pope Innocent III, at the fourth Lateran Council, definitely forbade the clergy to shed blood, not only in battle, but at all. No one in Orders might even open a boil. Why the ban covered works of mercy as well as acts of violence is hard for us to understand, but so it was. The custom by which the surgeon of a hospital is called Mr and not Dr even though he may hold the degree of M.D. can be traced to a Papal order made in the year of Magna Carta. In the meantime, what was to be done? The barber attended regularly to shave tonsures and to cut hair. He was the only man regularly available. The fathers taught him how to let blood and do what operations were necessary. So, Dr Keevil explains, the barber-surgeon came into being.

Monks were also discouraged from the study of physic. In 1216 we are told Henry III forbade clergy who were members of orders to practise as advocates or physicians. The prohibition did not apply to the secular clergy. More than 300 years later Thomas Linacre, the friend of Erasmus and Sir Thomas More, who obtained a charter for the College of Physicians in 1518, was in Orders.

Dr Keevil gives an interesting account of the daily routine in a hospital or a house of pity. The regimen, with its daily washing of the patient and his clothes and bed-clothes, was enlightened.

Surgery slowly advanced. It was bound by no unquestionable dicta of the ancients and frequent woundings gave practice and forced experiment. A profession began to grow. A surgeon's guild

¹ *The Principles and Practice of Medicine* (inaugural lecture by Normal Moore, M.D., F.R.C.P.), Adlard and Son, 1893.

² *Loc. cit.*

³ In the Regimen Sanitatis Salerni, addressed to Henry III, occurs a line that might be profitably displayed in every public lavatory:

Si fore vis sanus ablue saepe manus.

If you'd keep well, wash often times your hands.

was founded in London early in the fourteenth century and there were physicians who practised surgery. Dr Keevil notes the important point that the guild of surgeons quite early obtained the immunity in war that was accorded to heralds. Though the guild supplied surgeons to the king's household and to noblemen, the man in the street chiefly relied on a barber-surgeon. In 1421 a short-lived College of physicians and surgeons might have made a united medical profession but the barber-surgeons had their charter confirmed in 1424 allowing them to practise surgery. The physicians with their university degrees separated from the surgeons whom circumstances forced to associate uneasily with the guild of barber-surgeons.

So just when ships began to carry three masts and guns and to make long voyages, and when surgeons were needed afloat, they had to come from a body of inferior status whose members were not allowed to prescribe internal medicine. The physicians saw to that. If the ship carried no surgeon the plight of the sick seaman might be desperate. Dr Keevil describes the gradual change that, before the Dissolution of the Monasteries, led to the decay of the houses of pity. Trade increasingly offered an outlet for men who previously had found in the religious brotherhoods almost the only alternative to soldiering. The destitute poor increased. Henry VII founded the Savoy hospital to meet a growing need. His successor was forced by public opinion to re-found some of the great hospitals whose property he had grabbed, but in the country and in the posts the masyndews were gone. A sick seaman might be put on shore and find no treatment at all.

Dr Keevil does not regard the expedition to Guienne in 1512 as showing the beginnings of a medical service. Surgeons were carried as they had been a hundred years before. Yet the fact that the rates of surgeons' pay were laid down does at least foreshadow the time when the surgeon was accepted as a necessary part of the complement. That time was not long coming. Dr Keevil is probably right in taking the commissioning of the *Henri Grace à Dieu* in 1514, carrying as many sailors as soldiers, as marking the beginning of a new era. Ironically it was an era of misery in the royal ships and in many which made long voyages. It lasted for 200 years.

In 1544 the French fleet which was to cover an invasion was defeated by an epidemic largely due to food-poisoning. Soon the English fleet was suffering in the same way and then plague which was almost endemic further depleted the crews. In 1577, when Calais was lost, the same thing happened. There was no administrative machinery for dealing with the sick and wounded.

The culminating disaster of the century was in 1588. On that near-defeat of the Queen's ships by disease, as Dr Keevil says, a curtain fell which historians have never lifted. The victory and deliverance were remembered but not the disaster. Yet disaster it was and all the commanders realized it. It is a measure of the hardships of Elizabethan life that no memory was handed on of the sick men dumped and left to die in the streets and of the pressing of fresh men to serve in the infected ships. In a month or less the *Elizabeth Jonas* lost 200 dead of disease out of her crew of 500.

The Armada was beaten just in time by pallid invalids led by men of unconquerable spirit spurred by the dread of Spain.

The author shows how inevitable the mortality was considering food poisoning from long-kept badly preserved meat, the hearths on the ballast contaminated by accumulated filth, the decks washed by water drawn from crowded harbours, the seamen and pressed men never on shore and by 'Olruns' not allowed to undress. Vermin spread typhus. This and smallpox and bloody flux were recognizable by the two physicians that accompanied the fleet and by the experienced sea-captains, but the food-poisoning no one understood; 1544 it seemed had been forgotten.

The same kind of thing happened with nearly every naval expedition. It had come to this that naval war on a large scale was impracticable. The price was a serious loss of men. It was beginning to be plain that the problem was medical rather than surgical and lay in what we now call Public Health.

In a very interesting chapter, Blue Waters for Grey, the author describes the medical side of most of the great English voyages of discovery in Tudor times. England was late in the distant oceans and tropical climates. The Portuguese and Spaniards were the pioneers. Magellan sailed

round the world nearly sixty years before Drake's famous voyage. The long voyages and the distant lands brought problems that were almost purely medical and the best physicians proved to be the captains. Scurvy became the master dread. Scurvy was common on shore in the winter when most people had to live on salt meat and bread. Boys at Christ's Hospital suffered severely in Elizabeth's reign.¹

The story of the prevention and cure of scurvy is exasperating. Drake, like Nelson, knew the value of fresh provisions, especially fruit and vegetables, to keep his crews in health. Richard Hawkins, writing of his voyage to Brazil in 1593, noted particularly that oranges and lemons provided a certain remedy for the disease but spoilt his discovery by ascribing the cure to the sharp taste of the fruit.

The Dutch East India Company was probably the first body to use lemon juice prophylactically, issuing it to their fleet that sailed in 1598.

So James Lancaster used it when commanding the first fleet of the newly established English East India Company when his scurvy-ridden ships were able to leave Madagascar in 1601. But the remedy fitted no theory, and though its efficacy was proved again and again the fact was overlooked in vague theorizing on the cause. Hawkins's unfortunate suggestion that the cure lay in the taste caused lemon juice, or anything that had a sharp taste, to be used as a mouth wash instead of as a drink. Naturally the remedy was discredited as a certain cure and lives were lost.

In the new countries terrible diseases awaited the explorers. Again the captains had to act as physicians. They had experience and could at least warn their people against indiscriminate eating of foreign fruits. The first book on tropical diseases, we are told, was by an adventurer, George Wateson. His *Cure of the Diseased in Remote Regions* . . . , published in London in 1598, became a standard work. The chief tropical diseases recognizable are yellow fever and prickly heat. The greatest discovery of all, that mosquitos carried disease, was made by a merchant, Henry Hawkes who wrote in 1572. Though recorded by Hakluyt² it lay unnoticed for three hundred years.³

The concluding chapter of the Tudor period describes how a young man became a surgeon and how surgery was practised. An act of 1540 united the Fellowship of Surgeons with the Barber-Surgeons' Company, but in London at any rate barbers might not practise surgery, nor might the surgeon trespass on the craft of the barber. The first Master of the united company was Thomas Vicary, surgeon to St Bartholomew's and writer on surgery. Of the surgeons who wrote on their craft the most illuminating described by Dr Keevil is William Clowes. He had served in the navy and became surgeon to St Bartholomew's in 1575. He could read Latin and French and had studied the writings of continental surgeons. Clowes saw clearly that a sea surgeon must know something of medicine and boldly said that he would administer internal remedies rather than let a patient die for lack of them.

If all surgeons had been like Clowes their craft would have been held in greater esteem, but unfortunately the Company of Barber-Surgeons, in which barbers greatly outnumbered the surgeons, was obliged by its charter to press surgeons to serve in the royal ships. Local authorities were bound to assist and so all manner of men who could by any means be called surgeons were impressed. Apprentices ran away and were accepted by authorities only too glad of evading a difficult duty. If such a one were accepted as surgeon's mate and then later the surgeon died the mate might succeed as ship's surgeon and, if incompetent, add to the disrepute of naval surgeons. And to all this, though their charter gave the Barber-Surgeons' Company the right to examine apprentices, the licence of the Bishop of London and Dean of St Paul's was required which seemed to weaken the Company's position, and this was further weakened by the 'Quacks' Charter' of 1542 which permitted almost any self-styled healer to do almost anything.

Under the early Stuarts the Navy declined. Gross corruption at headquarters and heartless

¹ *History of St Bartholomew's Hospital*, by Norman Moore, Vol. II, p. 610.

² Maclehose Edition, Vol. x, p. 86.

³ In 1900 the Bishop of London, Dr Mandell Creighton, told the reviewer's father that he found it hard to believe that malarial fever was due to gnats. Perhaps some theological camels were easier to swallow.

incompetence bedevilled every main naval expedition, repeating a shameful story of neglected ships manned largely by human refuse, filthy, diseased and in rags. 'They stinke as they go, the poore rags their have are rotten, and redy to fall off if they be touched' wrote Sir William St Leger in 1625. The fleet that went to Spain the same year, a fleet in which we are told the sea-commanders were subordinate to the soldiers and any peer might override the captain, came straggling home from Cadiz in November and December to whatever ports could be reached. The miserable remnant who came back again found no provision such as had awaited the sick in Medina Sidonia's ships. The Mayor of Plymouth did what he could, but the disaster was beyond local effort. Whitehall was far away and relief would have cost money.

Surgeon-Commander Keevil points out that the decision to come home and to transfer the sick and wounded to transports was the first record in our naval history to be made after calling for sick returns. One commander, Captain Raleigh Gilbert, whose ship the *Constant Reformation* carried no soldier officers, reported no sick in his company of 250. His clean list was thought a marvel then and seems almost miraculous now.

One step forward was made in consequence of the failure and tragedy of Cadiz. When, the following year, surgeons and others were being impressed for the expedition to the Isle de Ré, the surgeons petitioned that they might have an allowance for physic and surgical equipment. The petition was well-timed. The havoc disease had wrought was remembered and was brought home by the plague. In 1626 an eighth of the population of London was reckoned to have died of it.

The surgeons' petition was granted and a regular rate was laid down according to the size of the ship. It was not enough, but was an earnest of better things to come. Otherwise the expedition in 1627 and that to relieve La Rochelle in 1628 repeated the story of neglect, disease and failure.

Always in human affairs the tide has turned before the surface stream declares it. So, when the Navy was reaching bottom in corruption, disgrace and misery, improvement was beginning. A hospital ship followed the expedition to Algiers in 1620. She sailed too late. Luckily the Spaniards were able to provide for the sick.

In his last chapter, *The Sum of Achievement*, Dr Keevil traces the slow evolution of a better state of affairs. There were two main problems, the care of the sick afloat and when put on shore, and provision for the permanently disabled. We are shown how, in spite of many difficulties, the Company of Barber-Surgeons was in 1633 made the sole administrative authority in naval medical matters. The Company had to be satisfied of a surgeon's competence as well as his equipment. The privilege was disregarded by Parliament but the Company remained the central body. It was something that there was a central body.

The grant of a charter to the Society of Apothecaries in 1617 led to squabbles. The Apothecaries had been united with the Grocers. An apothecary was what we now call a chemist. Increased knowledge of medicinal plants and mineral drugs had made his calling a special one. Overlapping duties led to troubles. Henry VIII had given the College of Physicians the right to inspect apothecaries' shops. By a charter of 1605 the Barber Surgeons had the right to inspect and reject improper instruments and drugs in an apothecary's shop belonging to a surgeon. The combination is significant. General practice was beginning. The surgeon apothecary was becoming the ordinary man's doctor.

At sea incomparably more fell sick than were wounded and the need for the ship's surgeon to know something of medicines was plain to all seafarers. Captain John Smith in his *Grammar and Accidence for Young Sea Men*, of 1626, gives the surgeon a definite place in the ship's company and notes that his chest should be supplied for physic as well as surgery.

It must be remembered that there was as yet no naval service as we understand it. There were central bodies for looking after the king's ships and the dockyards, but officers and men were secured by various means as occasion required. Dr Keevil compares the medical provision for the Navy, apart from the methods used, with that of modern steamship lines.

The first continuous medical service at sea was that of the East India Company, which Dr Keevil regards as the parent of such a service in the Royal Navy.

In 1612 John Woodall was appointed Chirurgeon General to the East India Company. He

or his deputy had to attend daily at his office in the ship-yard, and he had to appoint a deputy to visit the Company's chief anchorages in the Thames.

Woodall had to find surgeons, supply them with chests of drugs and instruments, and see that they understood their use. The drugs were supplied by the apothecaries and scrutinized by two Fellows of the College of Physicians. Every forty days Woodall or a deputy had to cut the hair of the company's employees and report on the unfit. This hair-cutting ensured a periodical inspection by someone used to recognizing disease.

John Woodall never served afloat. In 1616 he became Surgeon to St Bartholomew's. His *Surgeon's Mate*, published in 1617 with a larger edition in 1639, became a standard text-book. The title-page, reproduced in Dr Keevil's book, throws light on the thought of the time and perhaps of Master Woodall in particular. At the top is a symbol of the Trinity surrounded by the names of the nine orders of angelic beings. At the bottom is a portrait of the author, bearded with a skull cap and a large ruff. On each side four shaggy gentlemen, without ruffs but otherwise in seventeenth-century dress, represent Hippocrates and Galen, the fathers of medicine, and four physicians from the tenth to the sixteenth century, and above them, flanking the Trinity, Aesculapius, the god of healing and, opposite, his son Podalirius whose special gift was internal diagnosis.¹ Woodall evidently claimed physicians as his professional ancestors.

He strongly upheld the need for ships' surgeons to give internal remedies. He emphasized the value of oranges and lemons to cure and prevent scurvy, but like others weakens his recommendation by speculation.

By the laws of Oleron the employer's liability for a seaman disabled on duty ended when the patient had been found lodging on shore, if in a hospital or house of pity so much the better. After the Dissolution the law became increasingly inadequate. The Poor Law of 1601 brought some alleviation when more rigorously enforced under Charles I.

A few almshouses existed such as that at the Trinity House, Newcastle, but they could accommodate very few.

The need for official care of men landed sick and hurt was recognized in 1627. Physicians and surgeons were sent to the naval ports when the fleet returned. A hundred and twenty invalids, from Portsmouth alone, were conveyed to hospitals in London.

The Chatham Chest had been founded in 1590 by Howard, Hawkins and Drake for a mutual benevolent fund for poor or disabled seamen. Each seaman was supposed to contribute 6d. a month. Relief was difficult because an applicant had to apply in person at Chatham where the Governors sat only once a month. In consequence applications were few and funds accumulated and were, as a matter of course, embezzled. The scandal caused a commission of enquiry in 1608, but the abuse continued. Another commission, in 1617, found that very large sums had been borrowed privately from the chest. When, in 1628, the Council of War recommended using the fund for building hospitals for aged and maimed seamen the fraudulent depletion prevented the advice from being followed.

Gradually the abuse was stopped. By 1644 there was an official audit and records of each case were made. Applicants' travelling expenses were paid and a disabled man might be given the means for earning a living.

Vol. 1 does not end in a climax. We are in the middle of the story. Much that the author tells of surgical education and technique cannot be described here. We see knowledge increasing slowly and a changing climate of opinion. And we see how a main obstacle to knowledge was accepting improved theory. Plague, smallpox and typhus were the expected scourges of fleets and armies and of all crowded populations. The causes were unknown and no cures had been found. On the other hand, for scurvy, which appeared on every long voyage and could render a ship's company nearly helpless, a certain remedy and preventive was known in 1593. Its use was inhibited by vain theorizing on how it worked. Had proved practice been followed the disease

¹ His brother Machaon, not represented, attended to surgical cases. For this information and for supplying the names from an original edition of Woodall and for notes on the physicians I am indebted to Miss J. Eckhard, B.A., Cataloguing Assistant in the library of the R.C.P.

might soon have become an incredible memory. Instead it remained one of the master woes of oceanic travel. While writing this review in December 1957 I asked a retired sea-captain who went to sea in 1889 if he had ever seen a case of scurvy: 'Oh yes,' he said.

ALAN MOORE

BLESS OUR SHIP. By CAPTAIN ERIC BUSH, R.N. Allen and Unwin. 1958. 9 × 5½ inches; 282 pages; illustrations; 21s. net.

Captain Bush's naval career epitomizes the fighting sea service as this century has known it; and for a span comparable in war and achievement one would have to look back to the days between Hawke and Nelson. He was never in any doubt as to what he wanted to do, and he was still a boy in years when he survived the triple disaster of the *Aboukir*, *Hogue* and *Cressy*, and later found himself landing troops from a picket boat to fight at the Dardenelles. He was the youngest midshipman ever to have won the D.S.C., and his luck held, in that he was present at the only large-scale fleet action in World War I, Jutland. Even with the ending of the war proper, he was not quite done with active service, for he was sent on the Baltic adventure, after a comparatively quiet spell at Cambridge.

Captain Bush's way of telling a story, always by character, directly, snappily, gives colour even to the long spells of peace-time duty between the wars, and the reader hopes that World War II will find him with just the right seniority to play an important part. It is so. Captain Bush gives a graphic picture of Dunkirk, while a cruiser command in the Mediterranean brought him ceaseless excitement, including the Battle of Sirte and much sea-air fighting. It is almost unnecessary to add that he was present at D-Day, and his three D.S.O.'s won in World War II owed nothing whatever to luck, and everything to skill plus experience.

It is hard to think of a book more typically representative of the best of the executive branch of the navy. There is not a dull moment, and even when the author 'swallowed the anchor' he lost none of his zest for life and for the sea. It only remains to add that the illustrations are much better than in many books of the kind, and to say that it is hard to imagine anyone interested in the modern Navy who would not enjoy these pages.

OLIVER WARNER

AMERIKANISCHE KRIEGSBRIGG UM 1810. By R. HOECKEL. Price 13s. **SCHIFFSRISSE ZUR SCHIFFBAUGESCHICHTE: Englische und Amerikanische Schiffe, 1577-1810.** By R. HOECKEL. Price 18s. **DAS HANSESCHIFF UM 1470.** By H. WINTER. Price 14s. All published by Robert Loef and obtainable from Messrs Francis Edwards, Ltd.

These are three sets of plans for model-makers, the first two accompanied by some pages of text. The American brig appears also as the third vessel in Set no. 2, the others being the *Golden Hind* and the *Revenge*. All are 'reconstructions' in the sense that they are not based on any single contemporary authority, but any of them would at least enable a model-maker to produce something 'ship-shape' and free from serious anachronisms. The Hansa ship's plans are drawn on a scale of 1/50; the others are smaller, but very clear and easily followed.

R. C. ANDERSON

The following other publications of the Society are at present available for sale:

OCCASIONAL PUBLICATIONS: No. 5, *Lists of Men-of-War, 1650-1700. Part I. English Ships*. Compiled by R. C. Anderson. *Part II. French Ships*. Compiled by Pierre Le Conte. *Part III. Swedish Ships*. Compiled by Hj. Börjeson. *Danish-Norwegian Ships*. Compiled by P. Holck. *German Ships*. Compiled by W. Vogel and H. Szymanski. *Part IV. Ships of the United Netherlands*. Compiled by A. Vreugdenhil. *Part V. Indexes*. EACH PART 3s. 6d. (POSTAGE 5d.). No. 6. A Treatise on Shipbuilding and a Treatise on Rigging written about 1620-1625. Edited by W. Salisbury and R. C. Anderson. 15s., to members 12s. 6d., POSTAGE 4d.

THE MARINER'S MIRROR. INDEX TO VOLS. 1-35. Compiled by R. C. Anderson. Price 15s. (Members' rate 10s. 6d., POSTAGE 10d.).

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PLANS: Model-maker's Plans of the *Victory*, 10 plans on 3 sheets from those used in the restoration of 1923-35. (Price 21s.)

Enquiries for any of these should be addressed to The Hon. Secretary, Society for Nautical Research, National Maritime Museum, Greenwich, S.E. 10.

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